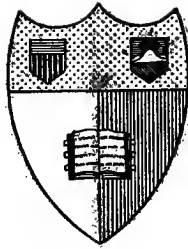


THE
PRINCIPLES & PRACTICE
OF
CONTINUATION TEACHING

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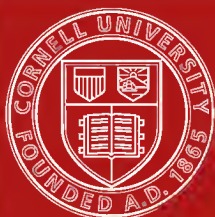
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THE
PRINCIPLES AND PRACTICE
OF
CONTINUATION
TEACHING

A MANUAL OF PRINCIPLES AND TEACHING METHODS
SPECIALLY ADAPTED TO THE REQUIREMENTS OF TEACHERS
IN COMMERCIAL AND CONTINUATION SCHOOLS

BY
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OF TYPEWRITING"

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PREFACE

IN writing this book I have been conscious of two main purposes—to give inspiration and to give help. I have particularly remembered the reader for whom the text is primarily intended, and I have accordingly refrained from plunging too deeply into pedagogical theory and speculation, preferring that those who are interested should pursue their studies farther afield. At the same time I have endeavoured to offer some definite body of theoretical principles to those whose reading will, of choice or of necessity, be confined to the limits of these pages. Throughout, I have been mindful of things as they are—of the teacher as he is, and of the student as he is. As between “What is and what might be” I have felt that this book should primarily consider “what is”; that it should look things squarely in the face, and, as far as possible, give those who consult it a present help—help straightway directed to their immediate needs and circumstances. At the same time I cannot expect that the very definite expressions of opinion which I have allowed myself upon a very wide range of matters, will escape challenge or controversy: my justification is that I hope thereby to have stimulated in my readers an active, as distinguished from a merely passive, interest in educational questions. If I have in measure done this, I feel that to that extent, at least, my efforts will have proved successful.

I have endeavoured to make faithful acknowledgment of my indebtedness to particular authors of whose works I have availed in certain chapters, and if I have come short it is in the chapters on “Principles of Teaching based on Psychology,” for much of which I have drawn upon Prof. James’s well-known writings, and “Aids to Teaching based upon some Principles of Logic,” in which I have been equally indebted to Prof. Aitkins’s “The Principles of Logic.” Those who know my propaganda work amongst Commercial Teachers will recognise in the chapter on “The Teacher and his Interests” a further plea for the consolidation and unifying of our scattered organisations. To those, and to all Commercial Teachers, I say “We must come together.”

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PRINCIPLES AND PRACTICE OF CONTINUATION TEACHING

CHAPTER I

CHILD EDUCATION

LIVING creatures are born with certain physical characteristics of form and structure, together with certain powers of consciousness and volition. These comprise their "being" or individual existence; in these respects each creature is a complete, self-contained, self-existent and highly complex organism. But form and structure are characteristic of all matter whether living or inanimate. As distinguished from a living creature, however, the most complex inanimate structure is very simple indeed. An inanimate object may have its physical characteristics entirely due to accidental circumstance or "chance," such as the shape of a particular piece of broken rock or the structure of a quantity of soil, or, on the other hand, its shape may be marvellously definite and precise, as in the case of a crystal or a basaltic pillar. In structure, an object may be uniform as in the case of an elemental metal, or compound as in the case of ores and many non-metallic "minerals."

Both animate and inanimate objects are subject to physical growth and decay, but there is a fundamental difference in the manner in which they are so subject. The

(a) **Physical** absence of life in an inanimate object results in growth and decay being merely the addition or the loss of material substance—obtained and lost respectively by the action of external agencies or objects. The growth of an animate creature is due to its absorption and assimilation of external physical matter, and with decay (death) all power of function ceases. The manifestation of the power of absorption and assimilation is termed "life," and is effected by certain "organs" possessed by animate objects (those which "respire"; such animate objects being known as living

“creatures”) and by certain characteristic structural features in those living objects which do not respire (these being known as living “matter,” and coincident to a large degree with what is known as “vegetation”).

The “organs” of living creatures in a normal or “healthy” condition act irrespectively of the creature’s “volition” or will.

(b) **Physiological** Some of these organs act unceasingly through life, as in the case of the heart and the respiratory organs, others act intermittently, as in the case of the digestive organs. Every organ, however, is guided and controlled by the action of the “nervous” system—the brain, and its ramifications the “spinal” cord and the “nerves,” which last extend to the most minute portion of the creature’s anatomy. By the nervous system, organs are stimulated to activity or increased activity, or are checked, stopped, or inhibited. The loss of the nervous control of an organ may result, on the one hand in the organ exhausting itself by increasing unregulated activity, or by its ceasing to act, or “inhibition.”

In order that living creatures may obtain the means of physical subsistence, they possess the power of motion and of locomotion to a greater or less extent, and, in general, are endowed with the five faculties or “senses” of sight, hearing, touch, taste, and smell. As in the case of the organs, the power of locomotion and the five senses are regulated by the nervous system.

The nervous control may be voluntary or conscious in some cases; involuntary or unconscious in others; and partly the one and partly the other, in yet other cases. In general, the nervous control of the organs is involuntary, although in some instances, as in the case of “holding the breath,” some slight amount of voluntary control may be exercisable. Locomotion in early life requires the exercise of conscious nervous control, and is, throughout life, a “voluntary” action; but when the nervous control has become habitual, its exercise becomes sub-conscious or automatic.

Whilst all creatures are possessed of organs (or, as they are commonly described, “vital organs”), which are subject to the

control of the nervous system, mankind is distinguished from all other living creatures by the possession of the faculty or power of “mind,” “intelligence,” or “reason”: the lower order of consciousness in

all other living creatures is expressed by the term "instinct." The organs, the powers of motion and locomotion, the five senses, and the form and structure of living creatures, constitute the "physical" creature, or the creature's physical powers; the reason of man and the instinct of other creatures constitute what is termed the "mental faculties." Both the physical organs and the mental faculties are subject to growth and development, but the characteristic difference in the mental faculties of man and of all other creatures lies in the degree in which they may be developed. In the lower creatures, intelligence in some forms of its expression appears at times to be almost human, but it is characterised, even in its highest manifestations, by uncontrolled or natural development, by fixity or rigidity after a certain degree of development, and by limitation to an extremely narrow range of operations relating to self-maintenance, self-preservation, and perpetuation of the species. But the greatest intelligence of the most highly developed of the lower creatures—the intelligence of the horse, the dog, the elephant, and other domesticated animals—is incomparably inferior to the intelligence possessed by primitive man. Far greater, indeed, is this inferiority than is the inferiority of primitive to civilised man. The most obvious difference in the higher development of primitive man over the inferior animals is in the degree of the power of inter-communication or speech, and in this one respect alone the gulf is immeasurable.

The powers of intellect of primitive man differ from those of civilised man rather in their limited range of application and disproportioned development than in their pristine

Primitive Man power or intensity. Limited material necessities and limited mental development are largely correlative facts, and the degree of civilisation of a race is not unfairly indicated in the number and character of its material necessities. The material wants of primitive man, like those of the lower animals, are largely concerned with self-maintenance, self-preservation, and perpetuation of the species, but they differ in being more varied and complex; in addition, the social manifestations resulting from the power of speech enable the primitive man to follow, however slowly, a constantly increasing mental and material development towards civilisation.

Civilised man inherits the same faculties as primitive man,

and inherits them in the same degree. He needs, however, so much more in the way of material requirements, **Civilised Man** his social relationships are on such a higher scale, and his attitude towards race perpetuation becomes so much more complex, that his faculties cannot be left to natural development. Hence, after natural development has proceeded to a certain stage, represented by **What Education is** from five to seven years from birth, artificial development or training is resorted to, and this artificial or trained development is called education.¹

From the very commencement of a child's school life, two distinct objects are kept in view by the instructors—the training and development of the natural mental faculties, and **(a) Infant Education** the preparation of the child for the social relationships. Natural development, as seen in primitive man, results in the distorted development of some faculties and the undevelopment or restricted development of others; the whole is entirely subject to natural environment. Hence results the characteristic features of primitive races—a high degree of cunning, the over-development of certain aspects of the observant faculty, as in tracking, woodcraft, etc., and the development of vindictiveness, cruelty, and superstition. With civilised man, there would be a like development (or retrogression) if the child were not early subjected to educational training. The non-recognition of this was the fundamental error in Rousseau's teaching,² and was

¹ "An uneducated person is one who is nonplussed by all but the most habitual situations. On the contrary, one who is educated is able practically to extricate himself (by means of the examples with which his memory is stored and of the abstract conceptions which he has acquired) from circumstances in which he never was placed before."—JAMES: *Talks to Teachers*.

² Rousseau (1712–1778) contributed an epoch-making book to educational theory in his work *Emile*. Of this book, Quick, in *Educational Reformers*, says: "His was one of the original voices that go on sounding and awakening echoes in all lands. Willingly or unwillingly, at first hand or from imperfect echoes, everyone who studies education must study Rousseau." He was the first to insist on the obvious truth that "the teacher must study the child"; he advocated that the child should undergo no formal teaching before 12 years of age—until then the child should learn from Nature and from his own acts and observations. The child's innate tendency to touch and handle everything was not to be checked—the fundamental idea behind our present handwork and experimental science teaching. Despite Rousseau's genius, his personal character and his vicious ideas on morality reveal themselves in the teaching—which is the keynote of his book—"that the teacher should in every way develop the child's

promptly recognised by the educationists of his day. The hooligan of our own towns and the apachés of Paris are, in some respects, evidences of lapses to the primitive state through inadequate education, although their cases are more complex than a single causation will suffice to explain.

When we consider the purpose and character of infant education closely, it is to be observed that the facts of the problem before the teacher include—

1. A physical organism practically in possession of all its structural parts. Nevertheless—

(a) The organs are immature and for a long period—the whole period of school life—those organs will be developing in size and strength.

(b) Similarly, the frame or general structure is complete in respect of its members, but is also subject to growth and development during the whole period of school life.

2. A nervous system complete in structure, but also growing in size and strength. This system—

(a) Controls the whole physical and mental powers and organs, and in many important respects has itself to come under the control of the mind or will.

(b) Unlike the physical system, it is not subject to direct physical observation, and the effects of injurious treatment may remain undetected.

(c) Whilst the physical system may have considerable influence upon the nervous system, yet the latter may at any time exercise very injurious influence over the former, and particularly if educational training or nervous stimulus is carried to excess.

(d) Great as is the control of the nervous over the physical system, yet some of the most important controlling influences are but very imperfectly developed until mid-school life, as, for example, the muscular control of the eye and of the hand.

animal or physical life, retard his intellectual life, and ignore his line as a spiritual and moral being." The result of his teaching is to be traced in the excesses of the French Revolution. Like so much that has been written on education, Rousseau's teaching yielded great truths side by side with great untruths. He was capable of forming "a connection with Thérèse le Vasseur, servant at an inn. He had five children by her, who were sent to the foundling hospital soon after birth, and were never traced." And yet he contributed a work to education which "everyone who studies education must study!"

3. A mind but little formed; such development as it has attained being largely unrestrained, unguided, natural development with its unbalanced characteristics, *e.g.*, self-centred, timid, emotional, superstitious, strong in affection and in hate, reticent towards the new or strange, unreserved towards the familiar or the known, strong in feeling, weak in expression, assimilative of ideas without judgment or analysis, tenacious of opinions and conclusions once formed, repellent towards contradiction or disproof, unable to conceive in the abstract, and hence forming concepts only from or upon the concrete.

These and many other features characterise the child first submitting to educational treatment, a frail tender piece of humanity

(b) **Child
Education**

calling for the most discriminating, most skilful, most sympathetic, most enthusiastic, most affectionate treatment. And hence the wisdom of

leaving infant education to women; the mother's work is but partly done, and all too often the little one has suffered from too anxious, too indiscriminating rearing; the foster-mother, as it were, is now the best guardian, and it is very much as foster-mother that the infant teacher succeeds best. But under her influence, and in the social companionship of so many equals, the child develops fast; soon the maternal type of treatment becomes unsuitable, and, whether boy or girl, more formal education is imperative. Bodily and mental strength have developed together, ideas have multiplied a thousand-fold, the child has attained powers of judgment and discrimination of a certain order, has adopted many of the social conventions, has reliance and confidence, and, hence, is ready for the real school education in the essential knowledge which is the foundation of all later acquirements. But that foundation is so comprehensive, and its laying is such a long and slow process, that at 14 years of age no child has acquired more than a certain amount of elementary groundwork. Its school life has done much—as much, it may be, as it is possible to do with the young, growing material—and still the child is “uneducated.” An enormous amount of effort and skill has been expended upon it, but no structure has been reared, or could have been reared without grave and enduring injury. The plastic material of the mind has been manipulated and toughened in the process of this child education, but the result is still

a plastic material of merely greater consistency, but without fixity of formation.

The field has been ploughed and harrowed, the fertilising elements have been introduced, but the seed from which the educational plant would spring has not been sown, and but too often is never sown. Such is the product of child education. Compared with the infant at the commencement of school life, the facts of the child's development stand somewhat as follows—

1. The physical organs are largely developed, though still subject to very considerable growth; one most important reservation—the age of puberty and its physiological concomitants is heralded.

2. The nervous system is largely perfected, but, like the physical organs, it is still open to very considerable growth—

(a) It is now capable of much subjection to the will, but further development has still to take place.

(b) It is, as it were, toughened, and in normal cases is little likely to sustain injury under normal conditions. Nevertheless, new nervous relationships will be established at puberty, and particularly the moral sense will be susceptible to the greatest injury under vicious influences.

(c) The physical system is now subject to the control of the nervous (*i.e.*, the power of volition is fully formed).

3. The mind has undergone a large amount of trained development—the child is civilised—and, hence, is social, self-reliant, enterprising; probes boldly into the unknown; welcomes to a degree that which is new or strange; has control over the feelings with much power of repression; has many means of expression and, generally, a power of expression adequate to the conception formed; assimilates ideas with judgment and discretion, and is capable of much analysis of them when so desirous; recognises the necessity for constant correction of ideas, and hence forms them less tenaciously; can conceive the abstract, but this, being one of the latest-developed powers, still requires cultivation.

This, then, is the pupil who, at the age of 14 or thereabouts,

(c) **Further or Continuation Education** comes into the hands of the Continuation Teacher, frequently coming to him along with the individual who has had the good fortune to receive

day school training for two or three years longer.

CHAPTER II

CONTINUATION EDUCATION

THE function of primary education—the education that can be given in any school of whatever type, up to the age of 14 or thereabouts—is generally misunderstood, and but too often the impossible is expected from such training.

The Starting-point

It was one of the objects of the preceding chapter to indicate a fact which is commonly ignored—the fact that the child leaving school under ordinary conditions is, after all, but a child. This child is still not full grown bodily, and, indeed, has the equivalent of another school-life period to pass through before attaining maturity. It may not always be easy to realise that a vigorous, healthy, mischievous, alert, troublesome, practical boy upon whom even sound chastisement makes but the most temporary of impressions is, nevertheless, but a child. The fact, however, is there, and the teacher who comes into contact with him subsequently to his leaving the day school, requires to realise this—not in order to treat him, with his new freedom and independence, as still under tutelage, but in order to grasp exactly the degree and order of the abilities he has acquired as the result of his school training, and to assess correctly the educational standard to which he has likewise attained. This last fact is of the utmost importance—*natura non facit saltum*—and neither can the teacher. The educational measurement should be as exactly made as possible, so that the continuation student is neither put back nor hurried forward. To recess the student is to discourage him, to advance him unduly is to create an unbridged gap that will of a surety prove to be the path of destruction.

When educational results are being criticised, and this, that, and the other deficiency in the human product appears as the resultant—or seems so to appear—a charge is but too often laid at the door of the school or of the educational system. But what are the facts?

An Inexorable Law of Nature

Generations of civilisation do not result in babies being born able to walk, despite the fact that man has walked for thousands of

years; neither is the modern infant able to walk one day earlier than the infant of a thousand years ago. No factor in physical development is accelerated one whit more now than at any previous time; for the same climate, the age of puberty is the same and the age of maturity is the same. And it is the same with the nervous system and with mental ability—the control of the one and the development of the other cannot be speeded up. Each generation starts in all these matters precisely as the generation before it started and precisely as the thousandth generation before it started. It is a sad fact, but it is indisputable, that whatever progress each generation may make in invention, in knowledge, in social betterment, it has to go back to the same beginning with the rearing of its offspring as the generations that have preceded. We meet with precocious children in all generations, but no precocity will show us an infant able to speak from birth, or able to read or to write without requiring the tedious and laborious process of specific training in all its centuries-old detail.

Another misapprehension is also not uncommon; it is, that by education, ability can be given to a child. This is not possible.

The laws of heredity are still largely unknown,
And Another or at least speculative, but it may be taken as established that the mental capacity of a child is fixed irrevocably even before the child is born. Education, therefore, cannot add faculties that are not inborn; and this is on a parallel with the obvious fact that any missing portion of the physical structure at birth cannot by any treatment be subsequently induced. What education can do with mental faculties is to develop them by proper exercise so that those which require it are perfected in their respective degrees, and to restrain them where that is necessary so that those which tend to develop too prominently and injuriously are not given the stimulus of exercise.¹ These are definite limitations that no educational system can overcome; if mental ability is generally lacking in any strain it can only be

¹ "The great thing in all education is to make our nervous systems our ally instead of our enemy. . . . For this we must make automatic and habitual as early as possible as many useful actions as we can, and as carefully guard against the growing into ways that are likely to be disadvantageous"—JAMES: *Talks to Teachers*.

cultivated through the agency of crossing under suitable conditions—and hence the rise of “Eugenics.”¹

Now that we know the limitations to the teacher’s efforts on the one hand, and the character of the student’s previous development on the other, it follows that, if the best possible development is to be made of the continuation student, the teacher must be capable of educating in the technical sense, as well as able to instruct in the special subject or subjects which are his particular province. If the teacher merely regards his task as one requiring him to impart a certain amount of specific information, he should not call himself a teacher—he is merely a coach, and his instruction is nothing but cram. The student will leave him with so much more knowledge gained, it is true, but the poorer in intellect if faculties which had been moulded under the day school training are left either to deteriorate (if they had formerly been cultivated) or to re-establish themselves (if they had formerly been repressed). Faculties, like muscles, must have exercise if they are to be retained “fit” and still more exercise if they are to be developed. It is a person’s faculties which make for his material success in life quite as much as his special knowledge—mere knowledge will carry no one far without ability, and ability is but a synonym for developed faculty. It is a person’s faculties, too, which most make for his happiness in life, and even the hewer of wood and the drawer of water, if meant by nature so to be, will be the better and happier if enjoying the full development of such faculties as he has been endowed with. Let it be repeated, then, that the teacher in the continuation school must educate as well as instruct, and he must study how, for, as Arnold says: “Whatever it is our duty to act, those matters it is our duty to study.”

Educational Method is Compatible with Maximum Instruction	appreciate that he makes greatest progress in the subject of instruction and achieves the greatest success if he constantly revises and perfects his educational methods. But some conviction at least, is demonstrable. What is knowledge?
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¹ A succinct and able summary of the present position of scientific research into questions of birth and heredity will be found in *Heredity in the Light of Recent Research*. (L. Doncaster: Cambridge Manuals of Science and Literature. Price 1s.)

Is it acquaintance with useful facts? Is it specific information upon a subject? This is no knowledge, or only half knowledge. One might as well say that taking food is equivalent to drinking or masticating, as though digestion were not essential to transform the thing taken into food. No. Real knowledge is acquaintance with facts or a subject *with understanding and assimilation*—that is, with mental digestion. The only way to give such digestion is to impart the facts by methods which first and foremost care for digestion—that is, by methods which are educative.

What is understanding? Is it verbal accuracy? Is it memory with reproductive power? It is neither. Understanding takes no note of mere form. If, as in a scientific definition, precise form is requisite, the reproduction of precise form is valueless as evidence of understanding, and in itself is worthless. Understanding is mental assimilation—the why, the wherefore, the contents, the excluded, the parallel, the contrast, the asserted, the denied, the applicability, the inapplicability, all are to be realised if there is really understanding. The mental faculties must be active in order to comprehend, to compare, to contrast, to include, or to exclude; and to get this mental manipulation, this mental activity, the teacher must instruct by methods which will ensure the requisite mental operations—these are, first and last, educational methods.

Teaching educatively is, however, entirely the concern of the teacher. The pupil knows at once whether he is being handled by a master hand, whether, in fact, the instructor knows how to teach. Knowledge of a subject or a method is not necessarily requisite in order to enable any one of intelligence to judge whether a person professing to teach it is really capable. Bluff or incompetency cannot be carried far, and when, as in the case of teacher and taught, the two parties have a long road to travel together, impressions are soon converted into decisive—and correct—conclusions. Nevertheless, but very little teaching capacity will suffice, from the student's point of view, provided that the teacher knows his subject and is earnest and sincere: he doesn't calculate how much more easily he would understand, how much more vividly he would remember the instruction, if it were given skilfully. If he is earnest, the student will accept the situation, and will back up the teacher by rendering willing attention and effort. If his

**The Pupil,
however, looks
first and last
for Instruction**

attendance is voluntary, the student attends the class for a very definite and clear purpose. That purpose is to get instruction, not to be educated. In the scheme of his future he has included a knowledge of this subject as an essential or a desirable aid; the method of acquisition is, to him, negligible, and the thing that counts is, how soon he will attain the standard of knowledge which he considers requisite. The teacher will always bear this in mind as far as possible, having due regard to the interests of all the students committed to his care, and of whom any particular student is but a unit. Yet, always and ever, the scholar will make the soundest progress when the teaching is educative as well as instructive.

Bearing in mind what was emphasised in Chapter I (*i.e.*, that of design and of necessity the education of children is educative in order to train and develop their natural abilities), it is practically certain that primary education will have little direct bearing upon, or preparation for, the technical character of the children's future work in life. This bearing and technical preparation is essentially the sphere of the continuation school.¹ There are many reasons why this should be so. For example, but few parents have their children's future marked out at the school age; and, again, technical instruction cannot be divorced from the necessity for some practical experience either before the instruction is undertaken or *pari passu* with it; and yet again, neither the age of the school child, nor the conditions of the school, nor the qualifications of the teachers admit of any technical instruction being given. But the continuation school student has reached the age of practical life. Already he has begun upon a definite career, or is on the verge of doing so, and he wants the necessary equipment

¹ It is not to be assumed, however, that school teachers are not earnestly alert to modify and improve both curricula and methods. The following extract from a leading article in *The London Teacher* for 14th April, 1916, is typical of present-day thought and purpose in education: "Conservative, rightly, against the assaults of mere marauding iconoclasts, teachers should be fearlessly radical in amending the curriculum where the vital interests of the children are concerned. We should ask ourselves boldly these questions: 'Is the present grading of the elementary school so perfect that it should be permanently continued?' 'Is the work in the schools too bookish, too widely divorced from life?' 'Is there not room in the department of higher education for an extension of what is somewhat loosely called scientific teaching?'"

of technical knowledge—it may, not unlikely, be even more than a mere want, and be a definite requirement or stipulation of his employer. Under such circumstances, it is a serious, a wrong, thing for any obstacle to be put in the student's path. Not that the student is to be deemed competent to choose exactly what he should study and what he should not: far from it. In the continuation school he must find that guidance, that kindly counsel, that competency to indicate and to require the right course to be taken, that will convince him and induce him to submit thereto. Hence, advice, persuasion, and quiet firmness must be brought to bear, and in proper hands they can be applied without discouraging the individual, and yet ensure that, with a ready and frank acceptance of the utilitarian character which the instruction must have, it shall at the same time really secure the maximum of educative influence as well as the maximum of utility.

In any teaching, success depends more upon the character of the teaching than upon the pupils, the equipment, or any other contributory factor. In continuation education

**This Utilitarian
Character must
be Recognised
in the
Actual Teaching**

this is even more pronounced in one respect—the utilitarian character of the actual teaching. Scientific foundations may have to be laid before an industrial subject can be advisedly taught, and general education may have to be continued before a student can undertake a complete course in technology, in commerce, or in art, but the prime purpose of the pupil's attendance must never for a moment be lost sight of. Hence, the scientific foundation will be coloured by the technical application, the business utility of the general education will appear to the commercial student, and the requisite of a sound education in preparation for the expression in art will be carried with conviction to the art student.

In all undertakings—industrial, commercial, or any other—things have not infrequently to be taken as they are; and the circumstances may not be such as they ought to be, or as would be desirable. The same is true of educational organisation, and at times neither the ideal nor the desirable is possible. This not infrequently happens in the matter of staffing—

**And Subjects
must be
Taught Practically
by Practical
(Technical)
Teachers**

a special teacher, however urgently needed, may either not be obtainable because there is not the supply, or may not be obtainable

because the expense is altogether disproportionate to the use that could be made of him. Under such circumstances, an inferior arrangement must be made, and a teacher with only general or remote qualifications must be utilised, and he must be called upon to do his best. The solution is generally to fill the gap by a man with theoretical knowledge of a kind that more or less approximates to the particular subject, and, of course, the work that can be done will also be an approximation, and, hence, but a makeshift. This kind of difficulty aside, the general rule should be that continuation work should be done by a teacher having a practical knowledge of the subject as well as having an adequate theoretical training. Sound as this is, and essential also as it is, it is frequently extremely difficult to obtain the services of a suitable individual. A good man may never have had a proper scientific (theoretical) training, and even if that requirement is met he may—as is so often the case—have no ability or training as a teacher. Those who have had experience in staffing for technical instruction know only too well how great and common are the difficulties. No doubt such difficulties are largely temporary, and as continuation education spreads and becomes developed the supply of practical men with the requisite additional qualifications for teaching work will be forthcoming. If it is granted that utilitarianism in technical subjects must be frankly recognised, it is an obvious corollary that the greatest utility should be obtainable by the employment of practical instructors. The advantages may be indicated as—

1. *Reality*.—The instruction appeals because it is really technical. It is what the students recognise as the actual thing itself.

2. *Economy of Effort*.—The application of the instruction has not to be discovered or sifted out by the student in the course of practice, but from the very beginning it is sifted out and applied for him by the teacher.

3. *Reconciliation of Theory and Practice*.—Sound theory makes for sound practice, but the necessary reconciliation of theory with the necessary adaptations, modifications, or reservations under practical exigencies, can only be made by a teacher who knows intimately both sides of the subject.

The great danger of practical teaching, however, is that the requisite theoretical foundation will not be well laid. Underlying

all practical work is a certain essential amount of theoretical foundation which, the better laid, makes for the better product;

**But the Place
of Pure Theory
is not to be
Overlooked**

but just as the theoretical teacher naturally steers as clear as possible of practical questions, so the practical teacher is always more predisposed to practice than to theory, particularly as it often opens up a wide field and is the most attractive to the students. Pure theory, however, is always a very profitable investment—principles, causes, foundational facts are educatively and actually the most far-reaching, the most reliable, and the safest. Hence, sound theory is on no account to be overlooked. It is less likely to be sought by the student and, consequently, inducement or pressure may have to be applied to get him to do it, or to do it adequately. So much has the pill to be coated, so direct is the student's aim at the practical application, that short cuts are oftener than not offered both in text-book methods and in the arrangement of the syllabus or the course of work, and this makes strong and firm dealing with the question of adequate theory imperative.

CHAPTER III

THE CONTINUATION TEACHER

The Present Source of Supply PUBLIC continuation instruction in England is at the present time carried on in technical institutions, art schools, schools of commerce, branch technical and commercial schools, and evening continuation schools. By far the largest bulk of the work is done by means of evening instruction given during the winter and spring months covering, more or less, the period between September and May. The location of the schools and classes, the character and number of the subjects taught, and many or most of the details of the organisation have evolved in a characteristically English fashion (*i.e.*, fortuitously). Along with this fortuitous origin, the provision of teachers has taken place much more on opportunist lines than on any methodical or rational plan. Hence, to-day, continuation education is given by teachers of every conceivable and inconceivable kind—the university extension lecturer; the university graduate; the secondary school teacher; the elementary school teacher; the manual instruction, cookery, laundry-work, domestic economy, and a score of other special kinds of day school instructors; art masters and teachers; practical and technical men of all kinds, including engineers, electricians, miners, builders, carpenters, plumbers, and artisans in many other trades and industries; accountants, clerical workers, language teachers, etc., to a seemingly limitless extent. Probably a more conglomerate, heterogeneous array of workers has never entered into the specialised work of any profession than into that of continuation teaching.

The Outstanding Characteristics of the Continuation Teacher As he exists to-day, the continuation teacher has a number of general outstanding characteristics. First and foremost, he is, almost without exception, dependent for his livelihood upon some other source of income—industry, commerce, professional day teaching, private occupation, etc. This is a serious drawback to continuation education *per se*. On the one hand, it is to be recognised that it brings disinterested, enthusiastic workers into the cause of continued education—workers

who participate, not for the income which results, but for devotion to a cause which appeals to them on the same noble lines as social, religious, and other voluntary, self-sacrificing services attract many of their most valuable and devoted adherents. On the other hand, independence of the remuneration received must of necessity import other workers, whose interest is of the lowest character, whose motives are not of a high order, and whose services are not of an enthusiastic or devoted character.

Another characteristic of the existing continuation teacher is his lop-sidedness. He is either a professional day teacher with little, or very limited, practical knowledge, or he is a practical individual with no teaching qualifications until such time as he has gained more or less experience. Perhaps worst of all, as regards the practical man, he is seldom of a sound educational standing—either he has been divorced from study for too long a period, or he left school too early to give him a standing in this respect above the continuation pupils who sit under him.

Anyone intimately acquainted with the work of continuation instruction will readily understand that it is in the nature of things

**The
Present Source
of Supply
must
largely continue**

that, whatever improvements may be made in the staffing arrangements in the future, this generation at least cannot possibly look to the general introduction of full-time specialist teachers, nor to any materially different source of supply of part-time

teachers. Speaking generally, continuation teaching does not offer the chance of a career, even where full-time employment can be offered, to compare with that which practical work offers to the type of practical man who would be best fitted to teach. Qualification for qualification, industry and practical work offer better remuneration and prospects than teaching, and they allow the individual much more freedom, particularly in leaving him free in the evening to do as he pleases. Then, too, even in densely populated districts, there is seldom sufficient demand in any particular technical subject for more than a comparatively small number of hours of instruction; and yet, again, so highly technical has industry become that a teacher can scarcely have practical knowledge of more than a single trade or branch of a trade, or a single branch of commerce.

The importance of technical education is now so widely recognised, and the demand for progress is so strong and insistent, that certain qualifications of the teacher may be specified as not only reasonable, but indispensable, even at the present time. These may be enumerated—

**Requirements
which may
Reasonably
be Expected**

1. Theoretical knowledge of the special subject or subjects.
2. Practical knowledge of the trade or industry or calling to which the special subject or subjects refer.
3. Some theoretical study of teaching and method.
4. Some definite training in teaching and class management.
5. Some practical teaching experience acquired under supervision.
6. Adequate general education.
7. A sufficient general knowledge of the main ancillary subjects relating to the special subject or subjects.
8. Intellectual, physical, and moral fitness for the responsible position of teacher.
9. Registration, granted after due evidence of fitness, by the Teachers' Registration Council.

These requirements will now be considered separately.

It has already been stated that pupils require a solid foundation of theoretical instruction, and if this is true of the student, it is a thousand times more true of the teacher; in fact, it is indispensable. A certain amount of theory would, under any circumstances, be pretty sure to be acquired by the teacher, but the more practical his training, the more likely is he to have let that theoretical knowledge which he might once have had, become stale, antiquated, and vague. To a practical man, steady and continued study is irksome, and involves the sacrifice of too large a portion of his leisure and recreation. Yet it is only by such sacrifice and continued effort that he can maintain or acquire an extensive knowledge of theoretical matters, particularly when much development or extension is taking place in a subject.

**(1) Theoretical
Knowledge**

It is very pertinent to ask what kind of theoretical knowledge is requisite or indispensable. The answer is not difficult when once it is clearly recognised how the knowledge is to serve the teacher. First, then, it should be recognised that only a scientific or adequate explanation of a practical matter is possible when the principle—

that is, the theoretical underlying basis—is thoroughly understood. Indeed, no understanding at all can be formed except by the possession of such knowledge. Secondly, practice follows theory to a very large extent, and the constant changes of the one have their complement in the other: hence, theory changes and becomes antiquated, as well as practice. A third important point is that facile, clear, versatile expression—such as every teacher ought to possess—is only possible as the result of wide and continued reading.

To answer the question as to what kind of theoretical knowledge the teacher should acquire, one may comprehensively reply “as nearly exhaustive as possible.” The teacher should be an authority upon his subject, and not even the most versatile practice can make him so. The only method is for him to be omnivorous—to read everything relative that he can obtain. In no other way can differing authorities be appreciated or their views corrected; in no other way can a teacher be able to answer the wide and often abstruse questions which will arise out of the actual classroom work.

If it were not an indisputable fact that technical subjects are actually taught by teachers without any practical knowledge, it might be dogmatically stated that such a thing
(2) Practical Knowledge is impossible. The explanation, however, largely arises out of the fundamental importance of theoretical knowledge and of basic principles: this will carry the teacher far and be of great value and importance to the student. It is to be remembered, too, that in many—if not most—forms of practice, there are such multitudinous variations that it is impossible for one person to have cognisance of one-half of them. Between this and an absence of practical knowledge is not such a great gulf, and hence the present absurdity that a practical subject is not infrequently—and with considerable success—taught by a person with no technical (practical) knowledge. But the value of this practical knowledge, even where practice is of bewildering variety, has already been referred to (p. 18).

Looking further at this from the teacher's point of view, it may be added that he can hardly escape from ludicrous blunders upon the most obvious and elementary points of practice unless he has himself had experience. It is open to argument as to how much practical experience is necessary, but the maximum possible is a

safe reply. In teaching, particularly where theory is well maintained and trade practices are constantly being observed and read, a very moderate amount of practical experience will go a very long way. It is not the province of the teacher to supply the pupil with detailed knowledge that he must inevitably acquire by practical experience, and acquire better in every way. Far better is it for the teacher to have a moderate foundation of practice and then to follow development and progress keenly. And this method must inevitably be followed where a technical teacher is employed full-time, or where a part-time teacher's practical work is of a very narrow or circumscribed range.

The position in which the question of the theoretical study of teaching method stands at the present time is, perhaps, the most outstanding anomaly that presents itself in the

(3) **Study of Teaching Method** whole range of education. The elementary school teacher has, compulsorily, to give serious and definite study to it, and is required to furnish examination evidence of his efficiency therein. But such a reasonable requirement—reasonable to any sensible man—is not imposed upon any other class of teachers except art teachers and those special subject teachers who participate in elementary education. Hence, a teacher in a secondary school, a public school, or a university has essentially only to afford evidence of his academic knowledge, and his ability to teach, or to become a teacher, is taken for granted. Continuation teaching stands on the same footing—technical knowledge is universally regarded as sufficient evidence. The anomaly will not stand debate, and the misfortunes that result, both to students and to the system, are serious and regrettable. In practical work, a person's knowledge is not divorced from the necessity for the possession of practical skill, and, in teaching, a person's knowledge of a subject should not be divorced from the necessity for him to prove efficient study and training for the practical side of his work—the ability to teach.¹ Fortunately,

¹ "It ought not to be necessary to prove to this generation the need for some technical preparation of its teachers for their work. . . . The butcher, the baker, the candlestick-maker are all inducted under supervision into the practice of their respective crafts, and they must all be the better for it; or else the practice of training them for their work would long ago have been discontinued. The work of teaching is not such work as can be undertaken by anyone 'dumped' into it at any time of life without preparation." —BARNETT: *Commonsense in Education and Teaching*.

the success of the new Registration will remedy this anomaly, and in time it may be expected that no responsible teaching work will be done by any one who is not prepared therefor by suitable study and training in teaching methods. The difficulties which have existed are likely to be soon removed, largely or wholly, and when that is achieved, education will have sloughed another absurdity of the many which have singularly characterised it, both in our own times and in times past. The fact that this particular anomaly can be accounted for is not material, but it is one of those astounding inconsistencies which are occasionally to be met with, viz., that earnest, conscientious, and scrupulous men should, without a qualm or hesitation, enter a profession (in this case, second to none in its importance to the national welfare), without any effort or intention of taking effort to prepare themselves for such a high and responsible calling.

This case stands on a par with the previous in many respects, and it is merely the greater difficulty in making provision for it

**(4) Definite
Training
in Teaching**

which distinguishes it. Theoretical study can be done by the individual himself, but specific training in teaching and in class management is a far more costly and complex problem, and one which

will be most difficult of solution. We are, nevertheless, on the eve of a serious attempt to grapple with it, and all that one can say is that it is so obviously desirable that the sooner it is satisfactorily dealt with the better.¹

This is a much simpler case than the last, but like it and the one preceding, its desirability is unquestionable and its prevailing

**(5) Practical
Teaching under
Supervision**

omission as a practice, anomalous. Elementary day school teachers, etc., are alone required to have had this experience; but here, again, the success of Registration is likely to provide a remedy.

There are several methods of conducting practical teaching under supervision. One of the earliest was the preparation of a lesson upon a set subject, with its subsequent delivery in front of the supervisor, who took notes and made elaborate comments

¹ "The fact is that training at least enables a teacher to teach all that he knows, to turn all his ways to profit. The untrained teacher may or may not be so effective; as a rule, a good deal of at least his earlier work is wasteful and unnecessarily exhausting."—BARNETT: *Commonsense in Education and Teaching*.

upon them after the lesson was ended. The method has many objections—the conditions are abnormal, as the teacher is usually nervous and excited; the class easily sees what is afoot and, owing to the presence of the supervisor, gives better attention and effort than would be otherwise likely. A method in not uncommon use in universities and technical institutions is for the intending teacher to be appointed to a subordinate post as laboratory assistant, student-assistant, or assistant demonstrator, etc.; but little or no actual teaching practice is, or can be, given, since the responsible professor or lecturer cannot afford to risk his class or to sacrifice a valuable lecture through standing by and allowing a novice to stumble through it more or less lamely. Even if occasionally such practice is allowed, it cannot be of any magnitude, as it would soon empty the class, which attends to hear the professor himself and not a substitute. In practice, therefore, the object is defeated, and the student-teacher, assistant demonstrator, or whatever he is designated, becomes little more than a laboratory attendant and bottle washer, a homework marker, a register marker, and the like. The incidental benefit which he obtains in this way is not a training in practical teaching, and the method is, therefore, self-condemned. A third method—and the one almost exclusively adopted in practice—is to give the beginner charge of a class and let him do the best he can. The grave objections are that the students are experimented upon—and, in the case of evening students, are largely driven away—and the teacher contracts bad habits or otherwise, without any check or aid to enable him to know his own faults and weaknesses. It is to be remembered, too, that when students attend a particular class but once a week, there is no time for experimenting upon them, particularly when experiment would merely give dubious training to an individual who may or may not make a teacher later on. The best solution would appear to be a period of service in a minor capacity, during which the intending teacher acts as understudy and at the same time receives theoretical instruction in teaching method with occasional demonstrations, following the instruction up by suitable book study and exercises. He is thus, on the one hand, introduced behind the scenes, as it were, and at the same time is undergoing definite instruction in principles and in method. A not uncommon practice is now adopted of providing holiday, Saturday morning,

and other conveniently-timed courses for continuation teachers in specific subjects. In these cases, the instructor is a specialist in the subject he takes, and lectures and demonstrates specifically on the teaching of that subject. In practice, it is to be feared that such courses largely resolve themselves into instruction in the subject itself, and no real instruction in principles of teaching is offered or expected—the classes become merely classes for giving the teachers a knowledge, or an extended knowledge, of the special subject.

It is no slander to specialist teachers of continuation classes to say that a large proportion have not received an adequate general education which would fit them for the

(6) Adequate General Education important and onerous position of a teacher.

And the explanation is obvious—accidental circumstance has called them to the teacher's office at a time of life when their education has been long ended, whilst that education never had, or was intended to have, any applicability to the needs of a future teacher. What should constitute an adequate general education is open to argument, and, indeed, may well be a variable quantity in accordance with the particular case in question. But the character and minimum amount can be pretty well indicated, viz., a knowledge of English sufficient to enable the teacher to speak and write grammatically; ability to write neatly and clearly, and with correct spelling; ability to speak with ease, clearness, freedom, and good pronunciation and vocalisation; some knowledge and appreciation of literature and of elementary science or scientific terminology; some knowledge of mathematics; some knowledge of drawing.¹

To be able to teach a subject properly, the teacher needs to be able to manipulate his knowledge freely, to balance and proportion

his views upon various aspects of it, to illustrate it freely and copiously, to recognise its place

(7) Knowledge of Chief Ancillary Subjects and relation to the larger body of knowledge to which it appertains, to observe such limitations

¹ "A teacher must certainly not be a mere specialist, informed in his own 'subject' alone. However willing such a teacher may be to listen to the claims of other 'subjects,' he is liable to the danger of attaching an excessive importance to the study for which he has spent his own absorbing endeavours. . . . A man will teach a 'special' subject all the better if he has been subject to the moderating and widening influence of a good liberal education."—BARNETT: *Commonsense in Education and Teaching*.

amplifications, and applications as will, on the one hand, prevent him from intruding into the domain of another teacher's work, and, on the other, enable him to make the teaching of his particular subject an adequate corollary to those other subjects in which the students will require its aid—in general, to have such an all-round knowledge as will constitute him really a master of that subject. It is only by an extended study that the teacher can satisfy these requirements, and the adequate study of ancillary subjects is the essential method. As a general rule, there can be no doubt as to what subjects should be regarded as properly ancillary, nor as to their relative order of importance.

The position of a teacher is one of dignity, influence, and importance, and calls for certain qualifications quite apart from special knowledge and teaching ability. These qualifica-

**(8) Intellectual,
Physical, and
Moral Fitness**

tions are more or less comprised in the triple requirements indicated under this paragraph heading. They are qualifications not easily capable of measurement or adequate discernment by those responsible for the teacher's appointment, but, for dealing with adolescents, they are of fundamental importance. The intellectual abilities of a teacher may to some extent be gauged by the character and quality of the education, training, and success which his past career indicates; his physical fitness can, in the necessary resort, be ascertained by medical inspection, although in normal cases a simple interview will suffice; moral fitness is generally ascertained by the aid of testimonials and references supplied by the teacher when making application for appointment, whilst it can frequently be reasonably taken for granted from the applicant's present position and standing.

This is not a matter for detailed discussion here. For the welfare of the teacher himself and of the profession, it is desirable that every teacher who has the necessary qualifica-

(9) Registration

tions should obtain Registration so soon as he has completed such qualifications. Since the present regulations require a certain amount of experience, the question of Registration does not affect the beginner. A summary of the requirements is given in the Appendix.

The work of the continuation teacher calls for other qualifications and qualities, in common with all other kinds of teaching work,

besides those which have just been enumerated. Some of these will be treated subsequently, but mention should be made here

of the following: personal disposition—geniality,

And Generally kindness of feeling, sympathy, sincerity, earnestness, self-control—which is of the utmost importance in dealing with continuation students; a sound sense of justice; a strong but quiet determination; a dignified bearing; neat but inconspicuous dress; good address, which will largely make for good discipline; energy; thoroughness; diligence; punctuality; and efficiency, which will beget appreciation and respect.

CHAPTER IV

PRINCIPLES OF TEACHING BASED ON PSYCHOLOGY

THE teacher's visible objective is the students before him; his real object is to make certain effects upon their minds, these effects having special regard to the particular subject of instruction. The mind, then, being the real objective, and an invisible, intangible, abstract one, it becomes essential to the teacher that he should acquire some knowledge of its characteristics and manipulation, just as it is essential to investigate the properties of a material before it can be certain that such material is suited to the particular purpose for which it is desired to use it. Thus, it may be necessary to investigate what stresses and strains a material will endure, its degree of homogeneity, its density, elasticity, elongation, conductivity, and other physical characteristics, with, perhaps, its chemical analysis also. Within certain limits, the teacher needs to have some analysis of the properties of the mind, in order to give him some knowledge of its receptivity, its susceptibility to instructional influence (or its permeability), its retentivity, its reproductivity, its capacity. This knowledge is to be obtained from psychology—mental science or philosophy. Fortunately, it is not necessary to study the science in detail in order to avail of its help for teaching purposes; it is sufficient to abstract from it certain facts and conclusions, and then to apply these as guiding principles and helpful instruments. The object of the present chapter is to present these and to discuss them.

In popular language, we may shut our eyes to a particular sight, or our ears to a particular sound. In this sense it is intended to convey the idea of a mere ignoring of what **Sensory Reaction** has, in fact, actually been seen or heard, and not to aver as a literal fact that one or the other organ was actually prevented from fulfilling its proper function. Nevertheless, the popular phrases bear recognition of an actual truth, for it is not all sights which we look at that we consciously see, nor all sounds which reach the ear that we consciously hear. "Day-dreaming" and "pre-occupation" witness to the same

facts. And the reason is that things are only seen, heard, felt, tasted, smelt, when, as the result of their effect upon the particular organ of sense, a sensation is carried to the brain, whence proceeds a "reaction," giving some form of cognisance or recognition of the sensory appeal that has taken place. All our knowledge of external matters comes to us through*their action upon one or other of the five senses being transmitted to the brain and there causing a reaction which the mind duly associates with the object causing the sensation.

Now this reaction is always revived under the same circumstances.¹ Repetition of the causing sensation gives repetition of

**The First
Psychological
Lesson**

the reaction, with the result that reactions may become "acquired." All "knowledge" is the result of acquired reactions. The first psychological lesson to be learnt by the teacher is, therefore, to *ensure that the pupils never receive any impression without giving a reaction (i.e., taking cognisance or making recognition of it)*; they must not be passive recipients, for, if they are, either their eyes are, figuratively, shut, or their ears are, figuratively, stopped. If the reaction results in the pupil doing something—touching, measuring, weighing, drawing, writing, imitating, comparing or contrasting, etc., the sensory reaction is clinched. Similarly, verbal reproduction is a reaction of a most valuable and necessary character, and should be a standing source of inducing the requisite reaction that is to produce consciousness in the first instance and cognisance subsequently.

There are certain reactions—certain mental responses to appeals through the senses—which are, as it were, "natural." They are exhibited in earliest life, and they early become

**Native Reactions
or Instinctive
Tendencies**

"acquired" or fixed. These "native" reactions, as they are called, are not only the earliest formed, but they continue throughout life, and, hence, are the strongest in their effects. For these reasons, they are recognised by the teacher as amongst the readiest and most valuable aids in securing the conscious co-operation of the pupil. In fact, every reaction which takes place sufficiently often to become

¹ "The mind does not stay at the purely sensational stage of seeing or hearing the object, but forthwith proceeds to interpret these experiences of sense in terms of *past* experience."—ADAMSON: *The Practice of Instruction*.

acquired or habitual is, as a rule, either a complication grafted on to one of the native reactions, or else it is a substitute for one which the causing object originally tended to provoke. An induced substitutional reaction, or a complication of an acquired reaction, are objectives of the teacher's art.

The native reactions include—

1. *Fear*. The instinctive or impulsive reaction for self-preservation. It may be fear against a physical, a mental, a social, or any other danger which threatens (*e.g.*, fear of ridicule, of failure, of anger, of reproof, of loss of esteem).

2. *Affection* with a desire to please those who are thus esteemed.

3. *Curiosity*. The active consciousness of inadequate knowledge and an impulse to know more.

4. *The Ambitious Impulses*. Imitation, emulation, ambition, pugnacity, pride—which, when rightly stimulated, tend so much to promote strength of character.

5. *Ownership*. The acquisitive faculty—which begins in the second year of life and is well seen in the “collecting” habit.

6. *Constructiveness*. The faculty of analysis and of synthesis—the faculty which, in children, makes them build and pull down, do and undo. It is appealed to in the laboratory and the workshop when students experiment to find out or to prove facts which they are required to know.

7. *The Social Group*. Love of approbation, vanity, shyness, secretiveness—reactions which the teacher may, on the one hand, need to restrain, or, on the other, to develop. They are reactions which are often at their maximum strength during adolescence.

From this study of the native reactions, the second psychological lesson can be drawn, viz., that *native reactions are the strongest, the commonest, the readiest to respond to stimulus or appeal, and, therefore, constitute an open door of entry into the pupil's mind.*

Second Psychological Lesson

It is often said, with implied regret or apology, that we “are creatures of habit.” This is perfectly true, for all our manifesta-

Habit

tions in life are nothing but masses of habits—practical, emotional, and intellectual—which make for our welfare or our injury. The power to acquire a new habit weakens throughout life, and the teacher of continuation students should recognise clearly that any habit or

any new ideas which he wishes to inculcate into his pupils, are much more difficult things for the pupil to acquire than they might have been if taught earlier. Especial care and consideration is necessary in dealing with those older pupils who, to their lasting credit, are so often to be found attending courses of instruction side by side with younger and more easily receptive students. These older students should be the subject of the teacher's kindest solicitude, patience, and respect, and this treatment can be accorded to them without putting any brake on the progress of the younger ones.

It should be interesting to the teacher to know at what period of life new habits practically cease. This age has been estimated to be about 25—thereafter the individual is what he has made himself, is to all intents and purposes "made," never to be undone again and but rarely open to modification. Ability in early manhood, and progress during later life, have intimate connection with the prolonged power to acquire habits after other people have ceased to be subject to their further acquisition. No one—teacher or taught—should be ignorant of what to do in order to form a new habit. It is essential—

1. *To set out with a fillip.* Whether a new habit is to be formed or a bad one discarded, the effort should be as keenly commenced as possible. We often call this "enthusiasm," and it is precisely the enthusiastic person who will succeed.

2. *To act early and often.* Every opportunity possible should be created and utilised in order to act upon the new resolution before it fades away under the resistance of existing habits.

3. *To cultivate and prolong effort in new directions.* This is the general power of acquiring new habits, and involves irksomeness and disagreeableness which should be resolutely faced as often as possible.

4. *To shun exceptions.* Exceptions are the re-establishment of old habits. In the acquisition of a new habit, therefore, exceptions to the line of conduct necessary for development should not be allowed until the new habit has become fixed, *i.e.*, is strong enough to maintain itself against the resistance of former habits.

**Third
Psychological
Lesson**

The third psychological lesson now evolves. The continuation student requires to form new habits if he is to

study successfully. To ensure their formation, *the teacher must himself be enthusiastic, and must make every possible effort to induce enthusiasm in his pupils.*

All mental impressions—small or great—make their actual impress upon the brain, and since every individual receives thousands of impressions through the senses every day,

Memory the conception of every one of these making its own individual impress is bewildering. One naturally asks how so many impressions assort themselves, and how it is that they are recalled or remembered when they are required. The reason is that the mind, in receiving impressions, groups or systematises them. Hence, it is a matter of common observation that, in the ordinary individual, mental impressions produce no chaos in the mind, the ordinary conceptions being well and clearly defined in themselves and subject to no confusion in the aggregate. Not all conceptions, however, are clear; not all are lasting; not all are easily reproducible or remembered. Some impressions are so slight as hardly to be impressions (*i.e.*, hardly producing consciousness) at all. Others are transitory and, apparently, pass entirely away. Apparent transitoriness, or forgetfulness, must not be accepted too readily as a fact. Every separate impression leaves the brain different from what it was before, even if that impression apparently fades completely away. Because of this actual effect on the brain substance, every individual is subject to remarkable remembrances—something transpires, and, lo! in a flash, an impression received years ago, and never consciously recalled or remembered in the interval, is there in the forefront, as it were, of the mind, and vivid and distinct with marvellous precision and detail. The mental impression has been stored away in the brain without conscious care or effort, and some suitable stimulus recalls it perfectly from amongst the millions of other impressions that are likewise stored, and which we might consider to be amongst a vast limbo of the lost.

Another point of common observation is that impressions are received in all degrees of intensity. Some are gently borne in, gently repeated, and gently reproduced; others make violent entry, branding themselves, on the critical occasions of life, as with fire. The former, if sufficiently often repeated or recalled, will eventually be just as clearly defined and just as easily and completely recalled

as the latter, whose cicatrices one can picture as deep and irremovable. On the other hand, both may, in the course of time, appear to be forgotten; even the deepest grief loses its pain (its branding in) as the years come and go. But we must pass to our explanations.

And first, as to the orderliness of our common conceptions. Every impression falls into our minds to meet there, as it were, innumerable memories, ideas, and interests: the more "educated" the person, the more numerous and varied are those former impressions. The "richer" the mind, the more surely will a new impression meet in it one or many previous impressions of a more or less similar kind. Unfailingly, the new conception is accommodated to its pre-existing kind, and this fact brings us to the Law of Economy: that, *in admitting a new body of experience we instinctively seek to disturb as little as possible our existing stock of ideas.*¹ So conservative is the mind that it always seeks to assimilate a new idea to something already there; a kind of resistance is offered to the according of a separate place to what is new; and, indeed, a new idea or fact that would entail extensive re-arrangement of previous ideas is either distorted in order to accommodate it, willy-nilly, to the nearest old concept, or it is forthwith rejected. Hence, the teacher should recognise that new conceptions may be incorrectly stored, not because the demonstration has not been clear or incomplete, but because the student's mind has distorted the facts in accommodating them to pre-existing conceptions of but a remotely similar kind. To overcome this danger, the teacher should present the new idea in as many different forms as possible, so that, as regards any particular student, he shall be able to find already in his mind a conception that will enable him to associate the new idea *correctly* with it; and, as regards the students as a whole, so that they may severally find a former idea—one of this character and another of that, according to their individual experiences—that will enable each to *store* the new conception so that it shall be capable of *correct reproduction*.

We may, then, lay it down, that, *in order to counteract the danger*

¹ "Incoming perceptions and ideas, the new material for the construction or renovation of knowledge, are modified from the first by the systems and ideas which the learner has already acquired."—ADAMSON: *The Practice of Instruction*.

of the distortion of conceptions through the operation of the law of economy, the teacher should present every new fact or idea in as many different forms as possible, or from as many different points of view as possible, thereby enabling each student to find the best and most reliable association of the new with the old.

**Fourth
Psychological
Lesson**

**Association
of Ideas**

Thus will each pupil the more easily, definitely, and correctly, remember. In arriving at this point of our discussion, we have had presented to us the importance of the "Association of Ideas."

**Still
Considering
Memory**

We are still considering the subject of memory, and we have found the secret of good memory—it is the secret of forming diverse and multiple associations of one fact with others. Associated facts are "remembered," dis-associated ones drop out in proportion as the native retentivity of the brain is strong or weak.

When we ejaculate: "Ah! that reminds me!" a new conception has unconsciously associated itself with a past one, and in doing so, has recalled it—made it to be remembered.

It is commonly considered that memory—the faculty of remembering—can be cultivated. We may learn "how" to remember, and by cultivating one form of memorising we may extend our ability to memorise in that form—hence, memorising verbal matter will enable us to memorise further verbal matter more easily; memorising through a habit of logical analysis will enable us to memorise in this way all the easier. But memorising in one form gives no power to memorise in any other form (*i.e.*, the native strength of the memory is a definite and fixed quantity).¹

**Fifth
Psychological
Fact**

The teacher should, then, remember this psychological fact, that the *best memory belongs to the person who thinks over his experiences most and who weaves them into the most systematic relations with each other.* The more the teacher makes his pupils to think, and the oftener he compels them to recall, review, or revise facts, the better and more easily will they remember them. And if,

¹ "The more recent observations respecting the transfer of faculty go to show that such a transfer does in some degree take place from one kind of attainment to another which has a common factor. . . . Memorising poetry as something heard helps the learning of 'dates' in the same way, but does not help in memorising faces."—ADAMSON; *The Practice of Instruction*.

after the teacher has talked and repeated, and written, and drawn, and illustrated, and experimented, and has multiplied the channels of approach into the students' minds, he should find that there is not that response at critical times—such as at examinations—that he might reasonably have looked for, let him remember the words of the psychologist: "The type of mind that cuts a poor figure in examinations may, in the long examination which life sets us, come out in the end in better shape than the glib and ready reproducer, its passions being deeper, its purposes more worthy, its combining power less commonplace, and its total output consequently more important."¹ In these cases, the total faculties of mind more than make up for a deficiency in one or other of them, and "what tells in life is the whole mind working together."

To the teacher, the interest of his pupils in the subject of instruction is the symbol that indicates to him whether or not their minds are predisposed towards his instruction: he judges

Interest whether effort is being extended in order to acquire the knowledge which he is seeking to impart, or whether he must make stimulative appeals in order to command this preliminary essential to success. It is desirable to understand something of the nature of interest.

That which is interesting is that which has for the individual mind something inherently attractive in itself, or else has, through secondary or other causes, a derived interest.

(a) **Inherent** The inherently attractive is that which appeals to special instincts in the individual: as these special or native instincts vary in different individuals, it is a matter of commonplace to find that one person can maintain a perpetual interest, almost, in a subject which, to another mind, is nothing less than anathema. In the one case, therefore, interest is pre-secured, and it is only necessary to point out that such interest must not be confounded with understanding or knowledge; in fact, this "voluntary" interest may be very misleading, for interest without effort is mere dilettantism.

In the other case—where interest is only derived
(b) **Derived** and not inherent—it will probably be found that taking students as a whole, their interest in any particular subject is oftener of this variety than of the former.

¹ James: *Talks to Teachers*.

For example, such vital inducements as being essential to securing employment, promotion, increase of wages, change in character of employment, and the like, may prevail, and in these cases the teacher will probably find that the derived interest, if seemingly baser than the native or inherent interest, operates, in fact, as the more constant and reliable of the two, and stimulates to the greater efficiency.

One characteristic of the derived interest will be obvious—*the subject of interest can only appeal so long as the ulterior inducing cause retains its effective stimulus*. Hence, it is

The Lost Sheep not an uncommon experience to find that a promising student, who was evincing a lively interest in a subject and acquiring it with gratifying success, suddenly comes to a dead stop and relinquishes the study entirely. Investigation will prove that the ulterior stimulus has ceased—the coveted end has been attained, or has been indefinitely postponed, or has proved incapable of maturing—and the complete and inevitable collapse has resulted. The earnest teacher will probably at first feel some disappointment, chagrin, or even anger or disgust—his hopes have been frustrated, his expectations dashed to the ground, perhaps a positive injury to himself as an employee may result—but calmer and more reasonable consideration will, however reluctantly conceded, convince him that, in general, the student is right. From the teacher's point of view, the abandonment of the study may be positively premature and a real source of loss to the student, but even that is not to be concluded, despite the most apparent circumstances. Unless some other source inducing the like derived interest can be found or is forthcoming, such student could not possibly continue to yield that attention and effort which he had previously rendered: the attempt would be overwhelmed by the constant struggle against superior forces.

This brings us up against a most interesting subject. Educationists and educational administrators are constantly seeking to promote the more really "educative" subjects—
"Interest" and "Vocational" Studies literature, art, and pure science—and look with a somewhat jaundiced eye upon those subjects known as "vocational" subjects, but which students, on their part, are almost entirely preoccupied with or interested in. Sufficient has already been said as to the advantages

and necessity of "educating" the individual, and the importance of this should never be overlooked. But it is fatuous to ignore the justice of the student's claims to vocational instruction. He has to make his future—it may be that he is engaged in what may figuratively be called a "death-grapple" with circumstances in the immediate present—and he has a right to claim a strong voice in the decision as to what he shall or shall not do: to do less than listen with predisposed inclination to favour his views is rank tyranny. If, by the exercise of harshness, *force majeure*, or other coercive means, the student is forced to relinquish, even temporarily, the question of the particular vocational subjects or subject which he asks for, he will need the most kindly and sympathetic and encouraging handling to induce the requisite interest that will enable him to take the substituted studies with any prospect of success; and what is more vital still, he will need this handling ten times more to help him to endure over the necessary interval during which his clamant or main interests are being dominated. Should he fail to survive the discouragements to which he has been forcibly subjected, a serious responsibility for the injury done him will lie at the door of his educational enemies. No matter how strong the educational grounds upon which the student has been thwarted, unless care and assurance have been taken to get his whole consent to the substitution, the educationist's end has almost certainly been defeated. There are only two justifications which can be pressed—one is that the student has sufficient native grit, and endurance, and determination to sustain him long enough; and the other is that the intended vocational studies would inherently involve certain failure because the subjects which essentially and foundationally are requisite are precisely those which the student desires, in his ignorance and incompetency to judge, to avoid. To be sure that the student has the power to survive the temporary negation of his desires is a most difficult matter, and in practice it would be wiser to act only upon the other justification—that the desired end could not be attained except by the course imposed.

**Vocational Study
does not
preclude
Educative
Teaching**

One important point should not be overlooked, viz., that the same end can be attained by more acceptable means; and that is, that the vocational subject itself should be made the instrument of education, and

that mutual concessions may achieve the very hopeful and rational arrangement that, *pari passu* with the vocational subject, the student will voluntarily submit to do his duty earnestly with a portion of the educational study sought to be imposed upon him. It need scarcely be repeated that, in order to make a vocational subject educative, the instructor must himself be capable of teaching educatively—a requirement which ought under any circumstances to be postulated, but which under these particular circumstances is imperative.

Before leaving the subject of interest, one important caution must not be overlooked, viz., that interest is not synonymous with effort. No effective reaction, no real learning and understanding, can take place without the exercise of effort on the student's part. Where a student's attention is based upon native interest, he may be both spasmodic and too sparing in his effort, and, unless the teacher can induce the requisite constancy and application, the native faculty will not suffice. The like may be observed in those cases where students render a derived interest in the subject of instruction. Hence, the teacher should never relax the practice of making varied presentations of a subject, thereby appealing to the understanding for real and even sustained effort, weaving wide and varying associations of ideas to aid memory, and securing adequate appeals to the native reactions in order to maintain lively and efficient interest.

Attention may be voluntary (*i.e.*, conscious and deliberate), involuntary (*i.e.*, rendered unconsciously, as when trapped by the masterly wiles of the teacher), or enforced (*i.e.*, rendered unwillingly but under the dominance of superior force). It is a fallacy to suppose that all instruction can be "interesting," nor is it good for the student that it should be so, for if all subjects could be made self-interesting, new habits could never be formed, and "character" would lose some of its most essential sources of formation. Fear, which is not to be confounded with mere physical terror (see under "Native Reactions," *ante*), and threats may have their places, and be necessary, therefore. But, in applying them, care must be taken not to make them mere jerky stimuli to attention; rather should they be such as can be steadily and gently applied. With regard

**Interest not
Synonymous
with Effort**

Attention

to voluntary attention, its prime character must be realised, viz., that it cannot be continuously sustained.¹ The teacher, therefore, cannot rely upon it—he must be sure that there exists an adequate native or inherent interest in the subject itself, or that a derived interest of an adequate kind is either induced or existent. The teacher, as already repeated, must constantly give new aspects to the subject, prompt new questions with respect to it, and make frequent changes in his method of manipulation and presentation. The ideal attention is the involuntary, always premising that the students make the necessary reactions of effort; but the teacher who can so charm his pupils that they unconsciously master all their distractive impulses and tendencies is only to be compared with the master mind and strength of genius.

The physical aspect of attention deserves careful notice. When pupils are “interested,” various physical manifestations of attention are to be observed, such as a rigid attitude of body, a fixed eye, a poised head. The teacher should constantly look to see that such indications exist and are maintained. And, conversely, he should himself maintain his own vigorous effort by avoiding relaxed attitudes when teaching—physical and mental effort must go together. And not least, the teacher’s attitude largely assists in inducing a corresponding concentration in the pupils. Hence, when the teacher sits, for example, the scholars sleep.

**Physical Aspect
of Attention**

¹ “Even though the health be perfect and the attitude of attention be sustained, the will is unable to retain concentration by an effort for more than a few seconds at a time.”—W. DILL SCOTT: *Psychology of Business*.

[To be still more precise, it may be added that laboratory experiment fixes the maximum recorded time at twenty-four seconds, with an average of five to six seconds. This, of course, does not refer to a continued series of acts of attention which takes place when a pupil receives instruction, but to a single act. The point is interesting to the shorthand teacher in particular, as explaining the ease with which the mind of the speed writer passes from one impression and reaction to the next.]

CHAPTER V

AIDS TO TEACHING BASED ON SOME PRINCIPLES OF LOGIC

A STRONG social and national characteristic is expressed in the familiar saying that "an Englishman's home is his castle." It indicates that access is barred by design and is only obtained by customary form and consent. **A more Impregnable Castle** The human mind is similarly a "castle," but it is rendered much less accessible by a stronger force than the restraining power of conventionality and law. Nature has protected it by such effective barriers that they can never be taken by assault from without, but must always be capitulated by the proprietor in person. So effectual has Nature been that even the freest and most spontaneous admission thereto is nothing more than a mere gaze over the parapets: the real mind is still impregnable. Hence, the elaborate machinery of our courts of justice, the Church "militant," the painful developments of educational method and science, and the slow growth of social reform.

But not only is the mind impregnable from without; in many respects it is as effectually a restraint of the personality within.

Between the within and the without, the without **The Only Way** and the within, a "great gulf" is, indeed, truly fixed. Whilst, however, the "ego" is contained within, and the world without is excluded from entrance, there still exists a means of intercommunication—the instrument of language. But it is the only way, and only in so far as it is perfected can it act as an adequate medium.¹ As Trench, *On the Study of Words*, says: "Unless the results to which the human mind arrives are plainly stated and firmly fixed in an exact phraseology, its thinking is to very little purpose in the end."

There can, however, be no perfect language. **And that a Defective One** Essentially the instrument for the transmission of thought, yet, as Peile says, even "the most fully-developed sentence may be misunderstood," and "the clearest

¹ Expression by art, music, gesture, etc., lies, of course, outside our present consideration.

speaker of the clearest language will not always express his meaning beyond any possibility of mistake. . . . No language . . . has succeeded in finding an expression for thought which is perfectly exact in form.”¹ It is important, therefore, that, of all people, teachers should fully realise the limitations of language—of their own in particular. They should not forget that speech is not synonymous with thought. Now the one, and now the other, is inadequate, but whilst thought depends upon the individual, language is social, and is essentially an instrument of social expression as distinguished from the individuality of the personal thought. The distinction and the mutual defects of thought and expression can scarcely be better expressed than is done by Dowden in his discussion of Shakespeare—

In the earliest plays the language is sometimes, as it were, a dress put upon the thought—a dress ornamented with superfluous care; the idea is at times hardly sufficient to fill out the language in which it is put; in the middle plays (*Julius Caesar* serves as an example) there seems a perfect balance and equality between the thought and its expression. In the latest plays this balance is disturbed by the preponderance or excess of the ideas over the means of giving them utterance. The sentences are close-packed; there are “rapid and abrupt turnings of thought, so quick that language can hardly follow fast enough; impatient activity of intellect and fancy, which, having once disclosed an idea, cannot wait to work it orderly out”; “the language is sometimes alive with imagery.”²

It is interesting to recognise exactly the implications in Dowden’s comments. They are three, viz., (a) that language may be superior to thought (*i.e.*, may actually express more than the individual himself thought or intended); (b) that development of thought and command of language may coincide; and (c) that the development of the mind may exceed the capacity of language beyond any possibility of mutual sufficiency.

The relations of language to teaching requirements are twofold. First, that the teacher shall have a certain capacity to use it; and,

Language Requirements in Teaching

secondly, that the students shall have a certain capacity to understand it. Comprised in the teacher’s capacity are many things, not all of which are to be expected in every case or on every occasion. Obviously, a first requisite is that he shall suit it to the capacity of the students. Another prime requisite is that he shall be clear and unambiguous. Added to these may be the

¹ Peile: *Philology*.

² Dowden: *Shakespeare*.

embellishments of eloquence—fullness, freedom, and the saving beauty of literary grace. No body of students is too poor, too negligible for the best and most graceful language that can be strung to their general intelligence. Whilst the description of a simple experiment is not an occasion for an oration, it is quite a good enough occasion for pure and well-chosen expression. Continuation students—technical, art, commercial, or other—have so much of their work remote from literary training or study, that it is almost a necessity that the teacher's language should, to the fullest extent possible, make up for the more or less inevitable exclusion of studies designed for, or nurturing elements of, culture.

But why turn to logic, as the heading of this chapter suggests? It has already been pointed out that language is the one medium of communication between the individual mind and

But why Logic? other minds. It has further been pointed out that this instrument is defective by nature.

And, again, it has been pointed out that clear and unambiguous language is a prime necessity in teaching. It is, then, just because logic is the handmaiden to the clear understanding of the limitations of language and is the means of avoiding its natural pitfalls that a simple examination of some guiding principles is desirable: the knowledge makes for clear and unambiguous expression. And, just as with psychology, it is the summarised results of the subject, and not its study, that the teacher needs to be concerned with.

Comparatively few people understand the language they customarily use, or the language they customarily hear. Except the student who is constantly turning up words in

The Acquisition of Words in General works of reference, people in general have but the merest superficial conception of the real contents of even common, everyday words.¹

¹ *On the Study of Words* (Trench) is full of illustrations at once striking and charming. Even a cursory glance at this remarkable book will be well worth while. A single extract here is all that can be given. In a chapter on "The Morality in Words," Trench says of "passion": "Look a little closely at the word 'passion.' We sometimes regard a 'passionate' man as a man of strong will, and of real, though ungoverned, energy. But 'passion' teaches us quite another lesson; for it, as a very solemn use of it declares, means properly 'suffering'; and a 'passionate' man is not one who is doing something, but one suffering something to be done to him. When, then, a man or child is 'in a passion,' this is no outcoming in him of a strong will, of a real energy, but the proof rather that, for the time at

And the reason is quite simple, as the following extract from Minto's *Logic* well illustrates—

In Geometry . . . we learn the definitions of the words used—*point, line, parallel*, etc.—before we proceed to use them. But, in common speech, we learn words first in their application to individual cases. Nobody ever defined *good* to us, or *fair*, or *kind*, or *highly educated*. We hear the words applied to individual objects; we utter them in the same connection; we extend them to other objects that strike us as like without knowing the precise points of likeness that the convention of common speech includes. The more exact meaning we learn by induction from individual cases. *Ugly, beautiful, good, bad*—we learn the words first as applicable to things and persons; gradually there arises a more or less definite sense of what the objects so designated have in common. The individual's extension of the name proceeds upon what in the object has most impressed him when he caught the word; this may differ in different individuals; the usage of neighbours corrects individual eccentricities.

Whilst this is true in the widest sense, it is particularly true of young people of the age and type who receive continuation instruction. They may have a fairly adequate stock of words for common, essential expression, but their stock is, in fact, very limited, *and such vocabulary as they do possess is largely of the casually acquired type, and has almost entirely had inadequate comparison, incomplete verification, and too narrow extension, and is, consequently, more or less vague and approximate.* Hence, the first lesson to be drawn from Logic—*The teacher should frequently define and constantly illustrate the terms and phrases he uses.*

The functions of words are twofold. First, they are the agents of memory in the individual mind to revive in it thoughts like to what had formerly existed. In this use they serve the psychological function of the association of ideas along with the clearer mental definition of ideas. Not much, if any, coherent thought can be carried on in the mind without the conscious or sub-conscious translation of ideas into verbal form; and the readiest recovery of

**First Point
from Logic**

**Functions and
Limitations
of Words**

least, he is altogether wanting in these; he is *suffering*, not doing; suffering his anger, or whatever evil temper it may be, to lord over him without control. Let no one then think of 'passion' as a sign of strength. One might with as much justice conclude a man strong because he was often well beaten; this would prove that a strong man was putting forth his strength on him, but certainly not that he was himself strong. The same sense of 'passion' and feebleness going together, of the first as the outcome of the second, lies, I may remark by the way, in the twofold use of *impotens* in the Latin, which meaning first weak, means then violent, and then weak and violent together. For a long time, 'impotent' and 'impotence' in English embodied the same twofold meaning."

past ideas is by the mental use of verbal forms. The second function of words is to convey to other minds the thoughts which the user has in his (*i.e.*, to raise in other minds the same thoughts).

Nor is the preservation and transmission of thought by words ephemeral. "Words convey the mental treasures of one period

**Second Point
from Logic**

to the generations that follow; and laden with this, their precious freight, they sail safely across gulfs of time in which empires have suffered ship-

wreck, and the languages of common life have sunk into oblivion." Here arises the second point from Logic—*Do not be satisfied with having evolved a general idea in your own mind or in that of your pupils, but complete and clinch it by putting it into express terms.*

But many circumstances combine to limit the capacity of words on the one hand, and to complicate and confuse their significance on the other. Thus, says Trench (and we may

**Third Point
from Logic**

take this as our third point from Logic)—"You cannot impart to any man more than the words

which he understands either now contain, or can be made, intelligibly to him, to contain. Language is as truly on one side the limit and restraint of thought, as on the other side that which feeds and unfolds thought." In teaching, the greatest danger in the use of words is

their misinterpretation by the students. And this is because of the inherent ambiguities that lie so abundantly in words, particularly so-called "simple" words. Then, again, rich as our language is in word power, the average stock is extremely limited, so that the ordinary individual has frequently to classify many shades of thought and differences of fact under a single word.¹

If he has the consciousness of differences, he has not the vocabulary power to express them. Hence the frequent colloquial addendum: "You know what I mean." Another reason for the too common use of ambiguous words lies in the fact that words do not come spontaneously to the mind. Word power is the result of a long process of patient, laborious word-acquisition needing frequent

¹ It may be mentioned that an authority has pointed out that the speaking vocabulary of an ordinary newspaper and circulating library book reader does not extend beyond 3,000 or 4,000 words; that accurate thinkers require twice as many; that the Old Testament contains 5,642 different words; that Milton's works only comprise about 8,000 separate words, whilst Shakespeare's vocabulary as used in his plays comprises 15,000 words. The most startling fact of all is the statement that an uneducated English peasant lives and dies with a vocabulary which scarcely extends beyond 300 words.

revision and use to maintain the word-power. Hence, words that are in the penumbra of one's vocabulary, so to speak, are precisely those which elude command just at the moment when they are wanted. Words of this type are descriptive, qualifying and classifying words in particular. It must not be forgotten, too, that the psychological law of economy of effort is constantly operating, as well as mental apathy and other individual characteristics which apply in particular cases.

So important is it that the teacher should always bear in mind the ambiguity resulting from the use of so-called "simple" words,

**An Extended
but Illuminating
Illustration**

that it is well worth while to discuss an illustration in some detail. In analysing the use of the common word "good," it will be found that its applications are bewildering. From being a colloquial expression of approval or acquiescence, its gamut passes through a range of mere relative superiorities until it reaches so far beyond the mere contrary to what is not good that it expresses the absolute negation of any possibility of evil; then the "good" may be moral or material in any of many senses. What is a "good" apple? It may be (a) a sound one as contrasted with one that is unsound, specked, or rotten; (b) a mellow one, compared with one that is unripe; (c) a sweet one compared with one that is sour; (d) a fine-flavoured one, compared with one of inferior, poor, disagreeable, or bad flavour; (e) a luscious one, compared with one that is juiceless or mealy; (f) a full-grown one, compared with one that is immature; (g) one of good appearance, compared with one that is inferior, poor, or of bad appearance; and so on. In all these cases, the use of the word "good" (and, of course, of the contrary word "bad") is vague and really meaningless. The appropriate, and necessary words are, obviously, "sound," "mellow," "sweet," "fine-flavoured," "luscious," "full-grown," ("mature"), "good-looking," etc.

Again. What is a "good" medicine? It all depends. It may be (a) one that is made from a good prescription; (b) one that is efficacious for the purpose for which it is prescribed or intended; (c) a more or less superior medicine to one or to others prescribed for a particular complaint; (d) a medicine that has not suffered in physical preservation and become bad; (e) one that has not lost its potency or become otherwise deteriorated or suspected through

age, etc. For precision, the proper descriptive words are necessary—"of good prescription," "efficacious," "most suitable," "unspoiled," "undeteriorated," "potent," etc.

But if this very simple word is defective as commonly used with natural and material objects, what are we to say with respect to its use in describing human conduct? Simply that unless there is a distinct indication, or a clear inference as to the meaning intended, it can mean nothing. Thus, what is a "good" deed? It may be (a) an act of piety; (b) of merely good intention; (c) of thoughtfulness; (d) of courage; (e) of generosity—moral or actual; (f) of self-sacrifice—moral or physical; (g) of sympathy; (h) of philanthropy; (i) of merely simple consideration, or of substantial consideration; (j) of clemency; (k) of self-denial; (l) of nobility; (m) of forgiveness; (n) of opportune action; (o) of efficient action; (p) of endurance; (q) of resistance; (r) of submission; etc., etc.

Lastly. What is a "good" woman? She may be one who is (a) typically feminine; (b) chaste; (c) benevolent; (d) kind; (e) thoughtful; (f) devoted; (g) religious; (h) good-tempered; (i) saintly; (j) affectionate to husband or children; (k) duteous; (l) patient under trial; (m) forbearing; (n) gentle; (o) forgiving; (p) meek, (q) submissive; (r) self-sacrificing; (s) exceptionally considerate; (t) sympathetic; etc.

The point might be carried further, accumulating evidence against this simple little word until we finally decided that it

Fourth Point from Logic

would have been better for it never to have been, or that we should forthwith consign it to the nursery, as useless for adult speech. The fourth point from Logic may then be stated:—*Ambiguity, and consequent danger of misunderstanding, may lie in the use of unqualified descriptive or categorical words, and not least in common "simple" words.*

Words are used in many senses, and this multiple application makes for ambiguity. Thus, we may have an obsolete use, an etymological use, a "literal" use, a scientific use, a metaphorical use, a colloquial use, an applied or technological use as in arts and manufacture, etc. Often it is no mere perfunctory matter to ascertain the meaning of words that seem plain enough already, witness the Bible language in general, to say nothing of literary, historical, and technical usage. Thus, scientifically, "phenomenon" means nothing more than something perceived or apparently

Applications
of Words
which make them
Ambiguous

perceived, and does not imply any reference to the strange, marvellous, or miraculous. Again, Bacon's *Essays*, which are contemporary literary English with the Authorised Version of the Bible, are unintelligible without annotations or a glossary, as witness the following typical extracts: "A man that is busy and inquisitive is commonly envious"; "In evil, the best condition is not to will, the second not to can"; "As for facility, it is worse than bribery." ("Busy" = a busybody; "to can" = to be able; "facility" = pliability; "bribery" = taking bribes.) Scientific writers are agreed that students should scrap all their preconceived ideas; whilst Nicholson, in the Introduction to his *Principles of Political Economy*, says that, in his opinion, "it is still one of the main functions of the economist to discover what ideas the words stand for, and to analyse vague and complex notions into their component elements."

It is equally the function of the teacher, as of the economist, to analyse terms and ideas, and to define the use of terms clearly

**Framing
Definitions**

and precisely. As a certain logician says: "Definitions are not conventional ornaments at the head of a page, they are necessities."

In any subject of study, the language of the street, of conversation, is treacherous and inadequate. *In defining terms* (and it may be made our fifth point from Logic), *the*

**Fifth Point
from Logic**

teacher should always endeavour to be precise and to be simple. The following are the accepted

rules in Logic for the framing of definitions—

1. *A definition must not contain the name defined.*—Thus, to define a teacher as "one who teaches" is a verbal circle. When it is difficult to avoid the use of a word from the same root as the word being defined, such word should be accompanied by a modifying word or words, as: "A teacher is one who teaches by profession."

2. *A definition should state the essential attributes of the class defined.*—Thus, whilst desirable as a matter of fact, and even necessary, that all teachers should be educated persons, it would be wrong to define a teacher as "an educated person," because being educated is not the functional characteristic of a teacher.

3. *The defining words must not be obscure, figurative, or ambiguous.*—Thus, a teacher should not be defined as "a lamp of intellect," or as "a practitioner in knowledge," or as "one skilled in expounding."

4. *A definition should not be negative where it can be affirmative.*—Thus, a teacher should not be defined as “one who is not uneducated and whose profession is not of the world outside the school.”

5. *The subject and predicate of a definition must have exactly the same extension.*—Thus, the illustration already given under Rule 2 is false in the additional respect that the classes “teacher” and “educated persons” are not identical or equally comprised.

It might almost be added as a sixth rule that “definitions should be intelligible,” when one bears in mind such meaningless jingles as Herbert Spencer’s definition of “evolution,” which runs: “An integration of matter and concomitant dissipation of motion, during which the matter passes from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity, and during which the retained motion undergoes a parallel transformation.”

Simplicity, as shown by the preceding discussions, is partly dependent upon the character of the words employed and partly upon the structure of the sentences in which they

Simplicity occur. The last preceding point from Logic—that in framing definitions the teacher should endeavour to be precise and simple—expresses a guiding rule for *all* occasions, but its importance is obviously greatest when *definitions* are being framed, because the ideas thus expressed are foundational for all the subsequent discussions that follow from them: definitions give root ideas. The logical consideration of simplicity now become necessary, and is as follows—

1. It is natural to choose the simpler of two forms when both appear to be accurate. This is the same psychological tendency as that which prefers the familiar to the strange. To both attaches a degree of satisfaction—the familiar is agreeable, the simple is “beautifully” simple. The actual rule in Logic is known as “Occam’s Razor,” or the Law of Parsimony, and is expressed: “We must not assume the existence of any more things than necessary.” To this might be added: “Nor should the expression be more complex than is necessary.”

2. There are three limiting cautions, however, which must be duly observed. They are—

(a) Care must be taken to avoid the danger of arriving at simplicity by omitting some essential part of the facts explained

or defined. Obviously, the danger here is greatest in those cases in which the question involved is either intricate or obscure.

(b) The definition or explanation must not only be harmonious in itself but must also be in harmony with other things, or, in more technical words, the included must be compatible with the excluded. A simple explanation that is opposed to other facts is not so adequate and satisfactory as a more complex explanation that harmonises with them.

(c) Old or accepted views should be carefully weighed before being rejected for new, but such consideration should not be prejudiced, for a false hypothesis is better than an obscure or incompatible one, and the formulation and illustration of new forms of explanation and definition keep the critical and observant faculties alive.¹

Every statement, whether true or false, asserts something about some supposed reality, and the difference between a true state-

ment and one that is false lies in the fact

Truth that in the one case the circumstances asserted in the statement actually exist, whilst in the other case they do not.

Hence, arises the sixth point the teacher should take from Logic, viz.,—*Truth is independent of our judgment about it and also of our feelings or sentiments.* The teacher, above

**Sixth Point
from Logic**

all people, must strive to see things as they actually are, and however agreeable or traditional a view may be, if it does not square with facts it must be firmly rejected. "To do so—to look facts squarely in the face and accept them as they are, no matter how pleasant or unpleasant they may be—is one of the very first conditions of greatness, and it is always a mighty aid to success in any career. Moreover, it is something which does not require any unusual mental ability. But it does require intellectual honesty." (Aikins, *The Principles of Logic*.)

¹ The subject of "Commercial" Arithmetic, as distinguished from "School" Arithmetic, furnishes many examples of the need for breaking away from the shackles of tradition. The author has had to urge, as against the views of authority, that even ex-secondary school students who have done a considerable amount of mathematics, need, nevertheless, to go into the Commercial Arithmetic Class in order to eradicate the time-honoured methods and the categorical rules which have been instilled into their minds in the day school. Indeed, if it were not for the iconoclastic character of the elementary parts of Commercial Arithmetic, the *raison d'être* for the lower stage would largely disappear.

It becomes important to understand the tests of truth. In the ultimate, they are three—

1. The affirmation or negation, and the conclusion claimed therefrom, must be consistent if the statement is true. If denial of the conclusion can be made consistently with the terms of the affirmation or negation, or if there is any possible way in which the relations stated could exist apart from those stated in the conclusion, then that conclusion does not follow. This test is the logical one of "Consistency"; otherwise expressed as the test of "possibility and impossibility."

2. That which is inconceivable may be accepted as false. In applying this test of truth there is danger of using it when it is inapplicable. Inapplicability often results in absurdity, and then reveals itself: in other cases its detection depends upon careful observation and analysis. This logical test is known as that of "Conceivability."

3. That which is uniform with past experience, may, until the contrary is established, be accepted as true, and of two reconcilable conclusions therewith, that which gives the greater impression of uniformity may be accepted, and usually is. That this natural tendency to conclude by the evidence of uniformity is both strong and generally sound, is evidenced in the popular caution, "Appearances are deceptive"—which is merely equivalent to saying, "Use the test of uniformity with a brake upon it" (*i.e.*, with discrimination). In still other words, the caution may be expressed as: "Do not press analogy too far."

The following further quotation from Aikins is pointed—

There are some questions which logic and its tests of truth will never help us to settle. If it is a question whether a certain state of affairs exists; and if there is no objection so far as consistency and conceivability are concerned to believing that it does, the only way of settling the question is to ask whether any one has observed the state of affairs itself or anything that can be recognised as its necessary cause or effect. If we cannot observe the state of affairs itself and if we cannot prove that anything which we do observe must be connected causally with something of the sort, we cannot prove that it exists. But if the state of affairs in question is one that might exist without being observed or producing unmistakable effects, we cannot prove either that it does not exist. It may be that there are mountains on the other side of the moon; but we cannot see them, and we do not know of any change that they would make in what we do see if they were there; consequently we cannot tell whether they are there or not. It may be that plants feel, that they enjoy the sunlight and the rain, and suffer discomfort in the cold; but feelings can never be perceived directly except in ourselves; and we have no idea what change their presence or their absence would

make in the behaviour of a plant, and so we can never know whether plants have them or not. It may be that every living soul existed on the earth before in the body of some man or beast, although it has forgotten what took place in its life there; but no one knows how the life of a reincarnated soul should differ from that of one that never lived before, and so no one can ever tell from what he observes whether the theory of transmigration is true or not. It may be, finally, that the world was created in infinite love and wisdom, and that all our human experiences are intended as preparations for some glorified life after death; but no one knows enough about infinite love and wisdom to say how a world made by it would differ from any other world, or how a life intended by the Creator as a preparation for another would differ from one which was not; and therefore nothing that we observe in the world can prove the matter one way or the other.

Of course, this statement is only intended to define the limits of logical proof. When we come to the region of faith, we accept or reject statements on grounds of belief and not of proof. Aikins adds, in this connection—

Science itself rests on faith . . . indeed what we call scientific “knowledge” is simply an interpretation that we give to our experience or some of it on the basis of this faith. But a faith in uniformity and coherence is certainly not inconsistent with a faith in purpose and wisdom and goodness also.

This chapter has already grown somewhat disproportionate, and much as there is still to be gained from Logic that would aid the teacher, more cannot be added here than to give some general cautions and some illustrations of common fallacies.

An Omnibus Seventh

1. To say that something is true of certain objects does not imply that it is false of others.

2. Similarity does not prove identity.

Cautions

3. Neither does dissimilarity prove non-identity if, since the comparison or conclusion was made, there has been an opportunity for change of circumstance.

4. Different degrees do not imply dissimilarity unless the relations expressed are incompatible.

5. Any number of coincidences between relations will not prove that they coincide always.

Both teacher and taught may easily fall into fallacy. The commonest forms of fallacy are—

1. The fallacy of verbal jingle resulting from spontaneous or unconsidered conclusions. In

Fallacies

order to avoid this, the teacher should not hurry conclusions when explaining or demonstrating. This is illustrated by the following simple example of verbal jingle. Let anyone be

asked the following three questions in prompt sequence: Who was the first man? Who was the first woman? Who killed Cain? The answer to the last question will almost certainly be "Abel."

2. The fallacy of verbal form without relationship (formally expressed as the fallacy of *Non Sequitur*) results when a statement merely takes logical form, as: "Logic is the science of reasoning and, therefore, one cannot draw correct conclusions if he has not studied Logic."

3. The fallacy of "begging the question" is commonly understood, but occurs oftener than is realised. The following is an example, taken from the correspondence appearing in a prominent daily paper during April, 1916. The writer protests against women wearing men's attire for certain forms of war work, and considers his contention that "it is not really a matter so much of what is convenient as what is right" is proved by quoting the following verse from the Bible and apparently "clinching" the proof by italics: "The woman shall not wear that which pertaineth unto a man, neither shall a man put on a woman's garment: *for all that do so are abomination unto the Lord thy God.*"

4. The fallacy of compromising an issue by the prejudicial use of epithets is a common rhetorical device and resort to secure the point in place, or for lack, of proper proof. Thus, in commercial instruction the "Theory and Practice of Commerce" has been made to usurp the older subjects of "Commercial English," "Business Practice," and "Commercial Correspondence," by stigmatising these last as "antiquated," and, still kicking at them, asserting that the former "at least gives students something to think about."

5. Two similar fallacies, known as the "*Argumentum ad Populum*" and the "*Argumentum ad Hominem*" consist in appealing to prejudice, passion, sentiment, or the like, and burking the logical discussion of the question. "The big and little loaf" cry and the "ninepence for fourpence" cry are examples from current politics before the outbreak of war.

6. Because in inductive reasoning—the drawing *inter alia* of general conclusions from particular facts—the conclusion only follows with more or less probability, the fallacy arises of

discounting or discrediting the method. It should be pointed out that induction makes for human progress, its bases being—

(a) That facts of true logical significance can be attained by direct observation.

(b) That change does occur in the world, and hence that some conclusions that were formerly correct no longer hold.

(c) That, in the changes which thus occur, there is the reasonable expectation of some uniformity.

(d) That cumulative instances justify broader conclusions, and that, therefore, the general process of examining as far as possible to exhaustion, is approximate proof.

CHAPTER VI

DISCIPLINE

WITHOUT discipline, an army becomes nothing more than a rabble, dangerous to itself and to everybody else. And without discipline,

**The Alpha
and Omega**

the classroom or the institution is fatal to its own purpose and success, and it is injurious to every student who comes into contact with it. There may be many and notorious faults of other kinds, but not one can be named which compares in viciousness to this and brings all else to naught in consequence. Many shortcomings in the educational scheme of things can be overlooked, being, indeed, venial, but lack of discipline should receive no quarter. Discipline is the alpha and omega in efficiency; the rest is intermediate and subservient.

The discipline of an army is not to be judged from the march past of its constituent regiments and battalions, and neither is

**Discipline
is not Order**

the discipline of the school to be estimated from the aspect of order—or disorder—as would appear during a review of the classrooms. At a march past every soldier knows that the conditions are so formal and abnormal, that it is impossible for him to do less than his best; and, similarly, no classroom review can be other than an inspection under conditions which compel the best formal appearances. But this aspect of mere order is by no means all that is to be said in regard to it. Order as indicated to a third party making a survey is very different from order as apparent to the teacher himself when no third party is present. It is not material that on some occasions this mere order may be much worse than on review occasions, or that at other times it may be much more precise or impressive. The substantial point with respect to it is that it may, even when apparently most gratifying to the teacher, be, in fact, a complete delusion. Quietness, absence of any overt act, apparent attention, serious aspect, and general comportment may be regarded as some of the most evident aspects of good *order*—they only constitute one element in good *discipline*.

In Chapter II a distinction was drawn between "instruction" and "education," and in the above paragraph a distinction has been claimed between "order" and "discipline," order being merely one of the constituent elements in discipline, just as instruction is one of the constituent elements of education. "Behaviour" and "conduct" are terms which, if carefully connoted, are synonymous with "discipline"; but the connotation must be defined. Discipline, behaviour, or conduct, then, comprises all those influences and dispositions of the class or school by which the relationships of teacher and taught are governed and their conduct regulated. When brought down to set form and expressed in definite rules, we have a "code" of discipline, and it may be said at once that no discipline can be measured, expressed, or defined by code; even the Army Regulations leave many aspects of army discipline undefined and unexpressed, so comprehensive, and frequently so elusive, is the term when brought down to verbal expression.

**Discipline a
Complex Term
of Difficult
Definition**

Discipline in the teacher—or the teacher's "behaviour"—is essential to discipline in the taught. Like the centurion in Scripture, the teacher is "under authority," and he should acknowledge the fact with the same frankness as the centurion. Comprised in the teacher's conduct are: Maintenance of the school's traditions, maintenance of the professional traditions, maintenance of personal deportment, maintenance of discipline in the pupils, maintenance of the internal and external regulations affecting the school's work, and subordination of self, and personal interests, to the interests of the school and the pupils. It is difficult for the occasional teacher—the visiting teacher, that is—to appreciate with adequate delicacy the school traditions, or even to become fully acquainted with the internal and external regulations governing the school, but there is no excuse for the permanent teacher who fails to appreciate these. In general, however, it may be said that they are, more or less, adequately appreciated in practice, and, hence, discussion is unnecessary. More difficult to appreciate, especially by the non-professional continuation teacher, is the professional tradition, but a right sense of personal character will always be a sufficient guide; and, again, discussion is unnecessary here.

**Discipline in
the Teacher**

Maintenance of personal deportment depends very largely upon personal character, and the failings of the one are largely coincident with the failings of the other. Nevertheless, **Personal Deportment** so important is this aspect of discipline in the teacher that some analysis of it is desirable.

There may or may not be regulations respecting the time of the teacher's attendance—experience usually convinces those responsible for the organisation and control of an institution of their necessity—but, rules or no rules,

(a) **Punctuality** it is essential that, in the forefront of the teacher's self-imposed rules of personal conduct, should be the rule of punctuality. Many things flow from the punctual arrival in the classroom—not least, the punctuality of the students themselves to a large degree—so that the importance of the habit is unquestionable. Hindrances abound—detention at the day employment, inadequacy of the interval between the day and the evening work, missing train or tram, prolonged preparation or revision of the work to be taken with the class, prolonged conference with the head, conversation with colleagues, etc. Every effort should be made to avoid these dangers, for, however unavoidable or justifiable the cause, the students only see the consequences; and, even with the best of students, the effect is harmful. When, however, the teacher does commit a breach of punctuality, he should unfailingly apologise to the class in a frank and dignified way, and not ignore their right to have him in his place punctually.

Another most important element of personal deportment is diligence. Students have an unfailing instinct in detecting laziness, sham, veneer, artifice to avoid effort, etc.,

(b) **Diligence** and the merited loss of confidence and respect is inevitable. The teacher should never forget that evening students make enormous sacrifices to attend their classes, and that they are, one and all, beset with hindrances of innumerable kinds; and when, after overcoming all these, they get less than the best and most earnest work of which the teacher is capable, their misfortunes are complete and their discouragement profound. From the first minute of the class meeting to the very last, the teacher should be indefatigable. His students should never leave his hands after any class meeting without having had good measure, pressed down and running over

"Order is heaven's first law," has said the philosopher, and here, order is very largely synonymous with methodical habits.

Fluctuating habits, unstable procedure, and whimsical conduct of the teacher, beget uncertainty in student's minds, disappoint their expectations, fall short of what is due to them, undermine their confidence. The teacher should be the essence of wise and deliberate method; his procedure and conduct should be calculable and reliable. Hence, his syllabuses should be well, fully, and logically arranged beforehand, his work and expositions should be carefully and logically arranged and carried out, his exercises should be arranged in precise sequence, his corrections regularly and uniformly made, his every action wisely calculated and executed. Lack of disciplined method is fruitful of bad consequences and involves slipshod and defective teaching, laboured and ineffective demonstrations and explanations, redundancy of effort, omissions, corrections, additions, withdrawals, and contradictions.

Continuation students are essentially different from ordinary day school students as regards social intercourse between them and the teacher. Up, as he is, against the first problems of practical life, the continuation student frequently solicits the kindly services of the teacher in matters which pertain to his personal welfare, and the warmest mutual regards are frequently established. Then, too, the continuation student has reached, in some degree, the years of discretion, and feels the benefit and stimulus of intercourse with a more matured and more highly trained mind. But, exactly as the influence of the teacher grows in this way, so much the more does it behove him to preserve discipline over his words and actions. Things that he would say or do in the presence of other persons of no higher standing or age than students, are not necessarily appropriate when conversing with the latter, and particularly whilst under the school roof, or under school discipline. Smoking, a mild expletive, comments upon colleagues, strong political or religious views, discussions upon questions of sex—and, particularly, flippant remarks—are all acts of indiscipline which the teacher should guard strongly against when in the presence of students and on school premises.

(d) Social
Intercourse
with Students

Organised behaviour in students becomes ultimately woven into character, along with habits. In the continuation school, the main function of discipline is that of an essential means to an end—the progress of the student. It comprises ready and cheerful conformity to any rules or requirements laid down for the general good: proper demeanour towards the teacher and towards other students, attention to the work in hand, order, the discharge of obligations such as punctual attendance, the performance of exercises and homework, obedience to instructions and requests, and courtesy.

Students' Discipline

Regulations of all kinds should be as few as possible, and, generally speaking, do not require to be "codified." Where necessary, as in the laboratory, workshop, or other place where practical work is going on, they should be simple, clear, unambiguous, and brief. ~~The best rules are implied in the general tone and conduct of the school or class,~~ and the prevailing atmosphere is readily caught by new-comers. ~~A strong objection to set rules is the fact that they presume, or at least imply, the expectation of a breach in respect to the matter for which they provide, whilst it is obvious that they draw specific attention to acts which should not arise or suggest themselves to the students. In short, the teacher who can maintain discipline has no need of rules and regulations.~~

People are largely estimated at their own valuation, and the teacher is largely valued by the students at the estimate which he holds of himself. Swelled head is not a usual

(b) **Demeanour** characteristic in a teacher, for it promptly begets opposition, mischief, and attempts to "try on" by the students, and so the teacher soon gets it knocked out of him. When, therefore, the teacher is urged to "stand upon his dignity," and to realise fully the important and responsible function which he performs, he is rarely liable to develop swelled head or to commit other breaches of good sense; if he does, he will at once find a faithful mirror in the troublesome conduct which his students will inevitably develop. If, then, the teacher comports himself with dignity and discretion, the demeanour of his students will rarely give him any cause for dissatisfaction, will rarely be faulty. The teacher should insist on the observance of due respect to himself, to the class, and to the school, and should not countenance any

breach; incipient misdemeanour should be promptly suppressed, and, on its occurrence, the teacher may well submit himself to some cross-examination in his own mind as to whether some personal fault of his own has not been the cause.

The teacher should never attempt to proceed with his work unless he has complete attention. Attention should be spontaneous, and seldom have to be requested. A little

(c) **Attention** tact in dealing with cases of inattention will go a long way. The teacher should avoid, if possible, indicating any particular person, but, in the first instance, rely upon a quiet request or reminder, expressed impersonally or vaguely. Should it be necessary to indicate the particular individual or individuals, the reference should be made naturally and quietly, and even with a smile; good manners and considerate tone require an unusually depraved sense in the student to be disregarded or taken offensively. Feigned attention rarely occurs where there is a good disciplinarian, but at times it has to be guarded against; the inexperienced teacher, rather than the older teacher, may be subject to this. Since attention is the first requisite to the acquisition of knowledge, it must be obtained at any cost, and, hence, decisive measures should be resorted to if inattention becomes prevalent or continued.

(d) **Order** Sufficient has been said on this point at the beginning of this chapter.

When the student enrolls upon a course of study at a school or class, he has actually or impliedly entered into certain contingent obligations. Thus, it is due to his comrades that

(e) **Discharge of Obligations** he should do his share to make the instruction available and agreeable to them, as, for example, by being punctual, orderly, attentive, etc., so as not to divert time or attention from the proper class work; it is due to the teacher that his position of responsibility, authority, and knowledge should be accepted and duly regarded, and that he is entitled to hearty co-operation and assistance in the discharge of his duties; it is due to the school or class that he should maintain and foster its reputation and contribute all that he can thereto; and it is due to himself, and those outside who are interested in his welfare, that he should do his utmost to make progress in his work, and to earn the esteem both of his teacher and of his fellow students. A strong *prima*

facie case can always be made out and used as a lever in bringing a student to the right pitch, by appealing to him that "He has no right to shirk this, to insist upon that, or to act so"; or "It is his duty to do this, to abstain from that, or to aim at the other"; or "His own interests demand this, depend upon that, or are involved in the other"; or "He cannot ignore the right of the institution in this, that, or the other respect"; or "The faith of parent, friend, teacher, etc., in his sincerity or good sense, will suffer"; etc. When difficulties arise, it is a valuable element in the appeal to a student or students to imply that they are amenable to duty, good sense, honour, or the like, and to base a claim upon such virtue; it adds a contingent moral fault to the actual one already committed, if the desired course is not adopted; and, in general, this method of appeal is effective, not only in the direction primarily intended, but also in the direction of having the moral results of leaving no ill traces behind, and of giving a certain amount of moral victory in having overcome an error or failing.

There are certain errors to which the young teacher in particular is liable, and which go to make for indiscipline. It will, perhaps,

Some Practical Suggestions

be helpful to summarise, under the form of practical suggestions, some cautions and recommendations that may or may not have been already indicated, as well as to summarise this chapter in a compact way. The summary is as follows—

1. Look cheerful and be cheerful.
2. Be transparently earnest and sincere.
3. Speak quietly and pitch the voice naturally—if shrill or high pitched ordinarily, ~~lose no time in cultivating~~ a lower and deeper pitch.
4. Assume that no question of indiscipline can arise, learn in your own mind really not to expect any, and act on the presumption.
5. Be scrupulously just.
6. Have the kindest affection and sympathy for young people, and esteem it a real privilege to be an instrument in their welfare.
7. Give your fullest and best at all times—good measure, pressed down and running over.
8. Cultivate restraint, good temper, courtesy, appreciation of the inherent goodness in human nature, and self-discipline at all times.

9. Conform to the things that are, and insist upon others doing the same.

10. Keep the students hard at work, and do your own share unstintingly.

11. Be mindful of the susceptibilities of students—let friends sit together if possible, place young boys in the very front of the class, and girls and older students at the back.

12. Have all seating compact—don't let students straggle all over the room should there happen to be any spare space.

13. Solicit no external assistance in securing discipline, but be resolutely self-sufficing.

14. Never be s̄arcastic—it has a waspish sting that reflects upon your own reputation afterwards as well as leaving virus behind.

15. Don't eject a student if at all avoidable, but recognise promptly and intuitively when it is unavoidable, and then act promptly and decisively. In making reconciliation, don't have public apologies—forgive, and remember that, having secured the victory, you can afford to give a generous restoration to the offender.

16. There is such a thing as tact, and it is an unfailing hand-maiden to those who study it—cultivate it.

In the maintenance of discipline, it is fundamental that breach cannot be allowed to pass without the teacher's recognition, and the student's consciousness that such recognition has taken place. It does not follow that there is only one form of communicating such recognition to the student (*i.e.*, specific reference to the breach). Direct, pointed reference involves the like public treatment of the offence, and it may be better—and, as a first resort, usually is better—not to make public to the class an offence which has not been publicly observed; the character of the offence must decide this.

Pupil's Breach of Discipline

Several classifications of offences may be made, according to the purpose for which the classification is made in each case. Take one—classification by allocation. This yields three groups: (a) Offences with which the actual teacher under whom they occur should deal with exclusively; (b) those which the teacher should deal with, either in conjunction with the parent or guardian, or which he should refer to the parent or guardian directly; (c) those which the teacher

Classifications of Offences

should refer to the head of the institution. A second classification would be in respect of degree: (a) criminal; (b) vicious; (c) culpable; (d) venial. Each of these groups may be qualified somewhat, according as the classified offences were intentional or premeditated, and unintentional or unpremeditated. No practical purpose would be served by an attempt to supply a list of offences under the above categories. The teacher must, on the one hand, exercise discretion and tact; and, on the other, must recognise that various systems of organisation make many differences in the general atmosphere and tone of an institution and, hence, in the powers and functions that the teacher may exercise. A few general statements may, however, be made. Thus, it is better for the teacher normally to confine his treatment of offences to those which he can himself deal with, and to refer all others to the head, leaving the parent or guardian out of the question; nevertheless, personal acquaintance or friendship with a parent will undoubtedly be a sufficient ground for referring certain acts of misdemeanour direct to such parent instead of to the head. Then, as to degree: no hard and fast line can be drawn—personal temperament, capacity, and many other things will modify or enhance the aspect of many offences. Criminal offences, whether intended or not, should not be treated by the teacher as a general rule. If the teacher is prepared to take some personal responsibility in order to do a kindly action, he may report direct to the parent or guardian in person; otherwise, all such offences should be referred promptly and unhesitatingly to the head. On the other hand, vicious offences are probably best dealt with by the teacher himself in the first instance, particularly if he is of a mature age, kindly disposed, strong in personality, etc. Culpable offences may be dealt with by the teacher if not serious; if serious, he may, as a general rule, refer them to the head or to the parent. Venial offences should certainly be dealt with by the teacher, unless and until they become a nuisance or of frequent occurrence, when they may be referred as before.

A List of Offences

An exhaustive list of offences is neither necessary nor possible, but the one appended will serve the useful purpose of giving some definiteness to the general treatment which has been given to the question here, and will also give the inexperienced teacher some idea of the nature

of the disciplinary requirements which the continuation teacher may from time to time have to meet—

Inattention; disorder—whistling, shouting, sliding on floors and seats, banging desks, books, apparatus, etc., stamping, standing up instead of being seated, changing places surreptitiously, etc., etc.; talkativeness; talking aloud; destruction of school property or of other property; breakages of school or other property; refusal to compensate for destruction or breakages; insubordination; laziness; omission to perform certain requirements, as, to do homework; refusal of the like; using obscene language; insolence; playing practical jokes; doing foolish tricks; committing malicious actions; causing inattention in others, openly or covertly; caricaturing; interfering with lights, students, passers-by, property, etc.; being late—avoidably and unavoidably; leaving early under false pretences; indifference; childishness; throwing; eating in class; untidiness—tearing up paper and throwing on the floor; smoking on the school premises; theft; added offences to primary ones as deception, cheating, lying; spite; making false or libellous statements.

CHAPTER VII

IMPARTING INSTRUCTION

THERE are two common methods of instructing students who have attained continuation school age; viz., the tutorial and the class methods. The former is often called also the individual method. Tutorial, individual, or coaching instruction is the method whereby an individual student—or but two or three students at most—monopolises the entire services of the teacher for the time being. By its nature, therefore, it is a costly and impossible method for general practice; and under a state supported, or other form of organisation of public education, it should have no place. If the private pupil wishes to stand the cost of this form of instruction, let him do so: it is for him, then, to see that he obtains value for his money. But the success of a tutorial student is no compensation for the expenditure of public funds. There is much instruction which, so far as the teacher is concerned, can just as easily be given to a dozen students simultaneously as to one, and for all practical purposes the individual student gets as much assistance from the teacher as he would require if monopolising his services. As between the tutorial and the class systems, the economy and general superior efficiency of the latter method is unquestionable; the one caution requisite in class instruction that is of vital importance is the limitation of numbers so as to attain maximum efficiency with minimum cost.

The respective advantages and disadvantages of the tutorial system may be stated as—

ADVANTAGES

Immediate solution of the pupil's difficulties; both difficulty and explanation are confined exactly to the individual's case.

Maximum progress of the student, the pace being exactly that at which the student is capable of travelling; there is no marking time for slower pupils to catch up.

DISADVANTAGES

Danger of too ready resort to the teacher, thus avoiding the mental effort by which alone knowledge becomes permanent and valuable.

The temptation is to let the pupil set the pace and not the teacher; the pupil, however, is not the best judge, and is as likely to go too fast or too slow as to hit the best pace.

ADVANTAGES

The student can pump the teacher dry (*i.e.*, can obtain the maximum capacity of the teacher); if he fails to do this (and is himself bearing the cost), the loss is his own entirely and no one else suffers.

There is no waste time; the whole lesson is a maximum.

DISADVANTAGES

A ready solution of a difficulty or the ready obtaining of a fact is not necessarily an advantage to the student educationally; and there is great danger of his choosing his own course, which may be merely short cuts of no permanent value. In good class teaching the progress is at least average (*i.e.*, suits the maximum number of students).

In well organised classes the waste is a minimum, and as much work is done as the students can well digest in the time; hence the private method is extravagant.

A particular form of tutorial instruction is seen in the "Correspondence" Course which prevails to such an enormous extent. Seen at its best, the correspondence course provides opportunities to isolated and persevering students who desire a minimum of study with maximum chances of success. Too frequently, however, it is a vampire.

Class instruction is the prevailing method in all forms of education—university, secondary, primary, and continuation. It is, fundamentally and essentially, *the* method of giving instruction, and it is a consequence of this method that teaching is an art calling for a professional status. But whilst the necessity for teachers who can instruct classes is permanent and universal, the number of individuals who are "born" teachers is infinitesimal to the teaching demand, and hence the supply must always be maintained by artificial means—by specific training in those matters which are requisite to the teacher's efficiency and can be made the subject of training.

It is a sufficient justification of this method to state the simple fact that no other practicable method can be suggested in place of it, but it is desirable, all the same, to state its advantages and disadvantages. These are as follow—

ADVANTAGES

It is economical of teaching effort and in cost.

DISADVANTAGES

In primary and continuation education, too great economy has been made in providing teachers and equipment, and classes have been injuriously large.

ADVANTAGES

It offers the highest opportunities for the educational training of the students.

Its social character makes it the first social school of life. The social virtues can really only be adequately cultivated in a social environment.

DISADVANTAGES

It is difficult for the teacher to treat any student's case separately and with the specific treatment that it may need.

The very superiority of the finest and most sensitive natures makes them liable to become blunted or deteriorated in a mixed and indiscriminate society.

Our remaining considerations throughout this book have reference only to the question of class instruction.

The function of the teacher is to teach—and the statement is not a mere platitude. It is, for example, not the teacher's province to coach, although there are always selfish individuals who, on the plea of having progressed beyond the work of the class at any particular time, try to get the teacher to prepare them specially for a higher examination than the class itself is preparing for, or otherwise make out a plea for exceptional and personal preparation or assistance in their studies.

**What Teaching
is not**

Again, the teacher who merely reels off so much information, with or without "notes," is not teaching in any sense of the word; neither is the teacher who fills up his blackboard with examples before the class assembles, and then works them off afterwards; nor the teacher who prepares elaborate experiments, in order, figuratively speaking, to let off a succession of fireworks. With older students, it is a common method of instruction for the teacher to deliver a set "lecture," and it is somewhat unfortunate that, in this type of work, the "teacher" is but too often designated a "lecturer." The function of the lecture is rather that of the method of address to an audience of experts than to an audience of beginners, or of students with an admittedly imperfect knowledge of the subject. The qualifications for a lecturer of this type are distinct from those for a teacher, and comprise, first and foremost, expert knowledge, obtained by first-hand research or highly specialised study of a particular question or problem. If he possesses it, a second and minor qualification is an agreeable delivery, but an audience of experts is most indulgent in this respect, and, provided the lecturer

**(a) Lecturing
is not Teaching**

has really some contribution to make upon the subject of his lecture, all other considerations are relatively minor and negligible. But this cannot be so in "teaching." The audience—the class—has not the expert's knowledge to sustain its attention and aid its understanding and judgment. It has, as it were, no mastication or digestion except for carefully prepared and administered pabulum: it has yet to develop the "expert" power of reception and assimilation.

Similarly, where a practical subject is being taught, a mere demonstration is valueless as teaching. A successful result is the demonstrator's predominating idea, and all else is subservient to this end. But to follow the minutiae and sequentiae of a technical demonstration demands considerable knowledge of the subject and its methods, and if this knowledge is not pre-existent in the minds of the audience, a mere demonstration is, to them, nothing more than the conjuror's "Hey! presto!" which leaves the audience as wise as before. No demonstration to students can be effectively and instructively made unless the experiment is backed up with a power of presentation, explanation, and manipulation of facts such as belong essentially to the teacher's functions.

**(b) Neither is a
Demonstration**

**Teaching
is an Art**

Teaching is an art: its methods are subject to rule and the application of rule. Some of the leading rules may be briefly referred to here.

1. *Get the measure or locality of the class.*—It is useless for a teacher to approach a subject without first sizing up his pupils.

Its Rules

As a general working rule, it is excellent to assume that the students have no previous knowledge, either of the subject or of the stage of the subject to be dealt with. But this is not a sufficient measure; to use the simile already employed, the teacher requires to know the students' power of mastication, deglutition, and digestion. He must avoid producing either indigestion or nausea. An examination test may reveal something, and but too often is regarded as the one effective and appropriate method of measurement: in fact, however, it is subject to very definite limitations, and, in general, is of little value and often impracticable. The best measure of a class is obtained from an analysis of a carefully designed entrance form. Facts such as age, occupation, general education, duration of the

school age, subjects of previous study and the stages to which the subjects have been carried, examinations entered for and the results obtained, are far better guides to the teacher than a personally conducted examination; and if he is not provided with a form for obtaining information of this character, he should improvise one and then make himself really acquainted with the information yielded. A source of measurement of no little value also, is a careful observation of the facial appearances of the students. Useful general deductions as to intelligence and character may thus be made, but, of course, such deductions can only be general, and may be very erroneous.

2. *Have a clear objective.*—The teacher must always know whither he is bound. In a course of work, the ground to be covered must be clearly surveyed and plotted from the very first. The number of lessons, the subjects to be taken, and the general proportions and relative values of the subjects, must be accurately gauged, so that the final result is not a speculation or a surprise, but the intended sequel to an accurate forecast and design. Similarly, no single lesson should be without its preconceived plan: before beginning, the teacher should know exactly what he intends to do and exactly how he can most effectively do it. There must be no stumbling upon a fruitful topic or a striking method; no desultory or rambling excursions upon unpremeditated subjects; no laboured, flat, or pointless expositions or demonstrations; no contradictions, obscurities, or confused statements. The lesson must have a definite, well-proportioned design, and time and tide should be in happy conjuncture, leaving no wasted margin at the end, nor requiring any hurried or inconclusive finish.

3. *Present attractively.*—Attention is best when it is involuntary—when the students are, as it were, seduced and unconscious of time and place and circumstance. The teacher will approach this desirable result by constantly seeking to make his teaching attractive. Attractiveness is not mere entertainment—the teacher who entertains his students is either a buffoon or a fraud. Whatever their failings, continuation students have a very large leaven of earnestness and sincerity of purpose. They want to know and to master. Difficulties are not for one moment to be avoided; they are to be clarified and surmounted. And this is quite compatible with attractive presentation. The teacher should know

what psychological impulses to appeal to, what reactions he should aim at producing, maintain a pleasant manner and clear delivery; then his presentation of an intricate or abstruse subject will be really attractive, and neither repulsion nor nausea need be anticipated.

4. *Develop naturally*.—Every lesson should have a natural and consequential development. There should be a logical progression from the known to the unknown, from the simple to the abstract, from the illustration to the underlying principle, from the general or vague idea to the definite or precise fact. If, as will usually be the case, the lesson is mainly or wholly synthetic, then the matter and its presentation should follow along the natural course of a ruling idea as though the lesson were a vivid description, or a theme, or a narrative. And if, on the other hand, the lesson is one in criticism, in investigation, or in analysis, the subject should be attacked by the broad statement of its object and scope, and then, as the lesson proceeds, it should be narrowed and narrowed until the conclusions sought have been finally established and the investigation logically completed.

5. *Illustrate freely*.—Plentiful and varied illustration is essential to good teaching. If we remember the psychological aspects which were discussed in Chapter IV, many considerations will at once arise to emphasise the necessity of this. First, it must be remembered that words—however carefully and well the teacher chooses his language—are not the actual things or subjects which are being discussed. Presuming that the words chosen are within the comprehension of the students, or else are adequately defined, it must still be remembered that to every individual they only express the idea or meaning which he himself has *previously formed from their use as known to him*. Hence, as a new aspect of meaning may not be realised or even suspected at times, the practice of illustrating freely may ensure that the correct idea is associated with each student's previous conceptions and the necessary enlargement or contraction of idea duly effected. The easiest conclusions are, naturally, drawn under the Law of Economy, and the teacher must constantly protect himself from being misconstrued. Then, again, the more plentiful and varied the illustration, the wider and more educative the teaching; shades of meaning are not felt to be mere quibbling or juggling with an idea, but are appreciated

as real differences, and breadth of view and facility of knowledge are strengthened.

A word of caution is necessary. Illustrations—whether verbal or real (descriptive, pictorial, or actual)—should not be abused. Mere variety without real utility and applicability is wasteful, confuses rather than aids, and distracts. In illustration, as in matter, the teacher should keep to the point and avoid being merely discursive or becoming side-tracked.

6. *Be simple and clear.*—Words which are not understood can convey no meaning, even though the pupils are attentive and mentally active. In general, the teacher should address the class in simple language, so as to offer a good chance of being understood. Writers upon English emphasise the importance of simple language, and particularly enjoin the use of words derived from the Anglo-Saxon. In doing so, however, they are most concerned with promoting purity of speech from the etymological point of view, and they may have no intention of implying that words derived from classical or other sources are necessarily likely not to be understood. It may at once be stated that it is impossible to speak upon the simplest topic without being obliged to use a considerable percentage of words derived from non-Anglo-Saxon sources, and the teacher should make no laboured attempts to attain simplicity in that way. All words that are understood by the class are “simple,” quite apart from the number of letters contained in their spelling or the source from which they have been etymologically derived. No desirable substitutes are possible for large numbers of words which are by no means simple in themselves; if the pupils do not know them, therefore, they must be explained and illustrated, so that they pass at once into the working vocabulary. Examples are—

Convalescent, franchise, distortion, fluctuation, squalor, discard, desecration, incidental, gesticulate, zeal, sequence, graduation, ductile, hoar, reticent, glossary, fumigate, stultify, vim, trend, quota, preoccupied, pourparler, pliable, carrion, farcical, eligible, repartee, relevant, docile, invidious, draft, broach.

The above examples are illustrative of words expressing very common ideas with special aptitude or force; a further class is to be found in technical and scientific words of all descriptions.

Once known, no alternative is ever sought or desired, and hence such words are correctly placed in the category of "simple" language.

Clearness of language is as essential as simplicity. It is largely a question of construction and order, and is secured by following the common sequence of words and phrases, by avoiding complex sentences, by the careful and discreet use of metaphor, simile, paradox and other forms of literary expression; by strict avoidance of tautology, redundancy, and similar forms of speech so common to rhetorical expression; and, generally, by keeping in the forefront of the mind the paramount necessity of being fully and easily understood.

7. *Ask questions.*—The teacher must early learn to question his pupils. The psychological necessity for this arises directly out of the ~~discussions in Chapter IV~~—it is essential to enable the teacher to open the receptive faculties and to produce intellectual reactions, and to enable the pupils to understand and to remember. Good questioning is one of the fine arts of teaching skill, and the power must be coveted and striven for. A detailed study of this most important subject is given in the next chapter.

8. *Teach both deductively and inductively.*—The faculties of mind act in two broad ways in enabling the individual to extend his knowledge—by processes of deduction and by processes of induction. Both are complementary, and it is essential that the teacher should understand and employ them. Speaking generally, the process of deduction is synthetic and that of induction is analytic, or, in other words, the one process is that employed in particularising and the other that employed in generalising.

It is, obviously, easier to particularise than to generalise. For example, it is easier to give a list of metals than to define a metal or to indicate the distinctions between the various metals; or, again, to catalogue according to a given classification than to evolve a system of classification; or, again, to trace the effect of an action or cause than to account for it; or, yet again, to apply than to discover. That is to say, deduction is easier than induction. The pupil, therefore, finds deduction more agreeable, and, naturally, leans towards it. For a similar reason, the teacher is liable to depend more upon the deductive method of teaching than upon the inductive, especially if he is neither energetic nor able to

question well. Whenever the pupil gives up trying to understand for himself and asks the teacher for an explanation, he seeks to obtain his ends by deduction: if the teacher answers the appeal by merely telling or explaining, he employs the deductive method; whilst if he takes the pupil in hand and answers question by question until the pupil has himself discovered the answer he was seeking, the teacher has employed the inductive—the educational—method. A good example of the difficulty of the inductive method of teaching is the attempt to get pupils to frame a satisfactory definition of a technical or scientific term. The first step—that of enumeration of qualities or attributes, etc. (*i.e.*, deduction)—is likely to be more or less easily led up to; the second step—selection of the enumerations which are to be contained in the definition (*i.e.*, induction)—is more difficult; the third step—the proper expression and combining of the selected enumerations (*i.e.*, further induction)—is still more difficult; the final step—the testing of the completeness of the definition, making sure that it is correctly inclusive and exclusive (or still further induction)—is, perhaps, the most difficult of all.

The respective spheres of deduction and induction should be clearly recognised. Where the end is of more importance than the means by which it is attained, the deductive method gives a quick and direct access to it. Thus, learning from books—obtaining, that is, the desired facts by the direct process of being told in the pages of the book—is deductive, and, obviously, this is the method of learning most commonly practised by adults; another illustration of the same type is to be found in the teaching of practical mathematics, in which the rule is given and the student has only to apply it. These methods of learning and instruction require much repetition and practice in order to fix the desired knowledge in the pupil's mind; and even when the knowledge has apparently been acquired, it is unassimilated and frequently passes away again, leaving little or no permanent result. The worst feature of the process, however, is that the pupil frequently is quite unable to manipulate the knowledge thus obtained, and, hence, is unable to apply it to new cases. The subjects and circumstances to which the deductive process is most applicable are those in which facts are unrelated by logical consequence and in which no amount of reasoning can yield any result, such as facts of history, political

geography, and literature, and the application of rules, as in the written work of shorthand, arithmetic, and mathematics.

Whenever the means are of more value—whether as disciplinary processes, intellectual processes, or educative processes—the inductive method is employed. The teacher and the pupil have both to make great efforts, and much time is expended in seemingly fruitless or scanty results. What, however, is done, is well done, and understanding, memory, and power of application of the knowledge are secured. The pupil “knows” and realises that he knows. His knowledge is power, and, in consequence, he becomes self-reliant. He applies his knowledge to obtain further knowledge, and all his efforts are “educative.” The inductive method is applied in teaching the proofs of arithmetic and mathematical propositions and rules, in science teaching, particularly in laboratory and workshop instruction, in the teaching of economics, and in all cases where processes of reasoning—logical processes—are available. In applying it, the teacher largely questions and reasons, and only resorts to telling (the deductive process) when unrelated or independent facts and illustrations require to be given.

A very interesting point may be referred to here. From what has preceded, it will be observed that the deductive method is particularly applicable to instruction in technological (trade) subjects. At the same time it is a method of lower order than the inductive, and is lacking in real educative value. It follows that it cannot be good for either teacher or taught to follow it largely or exclusively, however necessary and valuable the rules and practice of the particular trade subject may be from the students’ point of view. The desirable arrangement would, therefore, appear to be that both of them should take up, *pari passu*, the study of the scientific foundations upon which the trade rules and practice are based. The teacher is then called upon to rise to a much higher level of knowledge and teaching efficiency, and the pupils learn the why and the wherefore, and become really educated members of their trade or industry. It is in recognition of this better combination of training that we have continuation courses such as the following—

Mining Science and Mining Laboratory along with Mining Practice;

Building Science and Building Laboratory along with Building Drawing and Construction;

Engineering Science and Mechanical and Engineering Laboratory along with Engineering Drawing;

Economics along with Business Practice, Book-keeping, and Commercial Law;

Geometry, Perspective and Design, along with Freehand, Sketching, and Painting.

CHAPTER VIII

ORAL QUESTIONING

QUESTIONING in teaching takes several forms. Thus, there is examination questioning, homework questioning, and the questioning during actual teaching. Generally, examination questioning is to test whether and to what extent the pupil has really acquired the knowledge which the teaching set out to impart to him, and, to a certain extent, examination questions test both teacher and taught. As regards the teaching, however, too much is generally attempted to be deduced from an examination of the pupils; insufficient regard is given to the many other factors which should enter into the formation of a sound opinion, and certainly an examination of the pupils should not be made the critical test of the efficiency or inefficiency of the teacher. The function of examination questions should be twofold—to test the pupils in order to ascertain their progress and to test their development. The former is indicated by the manner in which they have acquired and digested the instruction; whilst the latter is indicated by the thought, adaptability, resourcefulness, originality, perception, and application which they display in their answers.

Homework questions should occasionally have the definite object of testing the pupils, especially when they can be of such a nature that the students are obliged to rely upon their own resources; but, generally speaking, their function is not to test the knowledge gained. In the study of any subject, it is essential that the students should themselves perform a great deal of work—they must do their own thinking, and cultivate for themselves the requisite proficiency; homework questions can contribute to these ends in a very great degree if they are properly and carefully designed. Research, elaboration, compilation, verification, elucidation, practice and dexterity—some or all of these are to be the object of the homework exercises. Time in class is very limited, and the homework can supplement it in a most important degree. So important is this aspect that it should be almost the invariable function of the homework to effect one or more of these ends.

Viva-voce, or oral, questioning in class may have any of five functions, viz., (a) to localise the class so as to find out what is already known, and from what point the teaching should commence; (b) to test whether work done has been properly understood and acquired; (c) to stimulate attention and mental activity; (d) to aid the instruction; and (e) to summarise or to recapitulate, and thereby aid the memory. These will be dealt with at length.

The scope of oral questioning is much more restricted when dealing with older pupils than when dealing with children. Older pupils are much more reticent and fear to make mistakes far more than do children, and they must accordingly be treated much more tactfully and considerately. A great deal depends upon the individual teacher. He must have a kindly and sympathetic manner, be earnest and sincere, have ready speech, quick hearing and comprehension, and by nature or by art acquire much real skill in the art of questioning. With these qualities, the pupils will readily recognise the handling of a true craftsman, and the teacher may make his oral questioning a really efficient and valuable instrument in his teaching. Certainly there will be no resentment in the minds of the students against oral questioning if it is judiciously conducted.

If the teacher is well known to the pupils, oral questioning should have already become a constituent part of the class teaching; but if the pupils are new, it may, as a general rule, be well to arrive at the stage of free questioning by degrees. In the first instance, the teacher should rather question as the orator does—ask his questions pointedly and pertinently to the subject in hand, but supply the answers himself without waiting for the students to supply them. This, however, to some extent defeats an essential purpose in questioning, as it does not leave the pupils time to think. Hence, the oratorical form should not become habitual, but should soon give way to the direct question. A longer pause after the question will unconsciously imply that an answer is expected, and a proffered one should be readily accepted. By degrees, the true relations of mainly questions to be answered and of occasional oratorical questions should be established. With older students, it is in every way desirable for all, or nearly all,

**Oral Questioning
and
Adult Students**

**Method of
Putting Questions**

of the questions to be addressed to the class as a whole, not only because no one knows who may be asked for the answer and, therefore, all must prepare it, but because no sign of ability or willingness to supply the answer should be required—whilst children may be required to raise the hand as a sign of readiness to give the answer, older students might rightly resent such an expectation. Rather than risk the danger of awkward situations arising, the teacher should frankly express his wish to have answers, and state whether or not he proposes to select a student to reply.

Whatever function any particular oral question is intended to serve, there are certain general requirements respecting the framing and sequence of oral questions that are to be observed. These include—

**Framing
and Sequence
of Questions**

1. *Brevity*.—All questions should be brief, and be expressed in the fewest possible words. A question should not be an instrument of explanation, for that is confounding the sphere of questioning with that of instruction. If a question has to be expounded or elaborated, it is evidence either of incapacity or of prematureness.

2. *Clearness*.—Sometimes it may be desirable to put a question in a form in which the meaning is not clear, as, for example, when it is desired to provoke a return question or to elicit a qualified or guarded answer. Generally, however, the question should be unmistakably clear—there should be no attempt to set a puzzle, but what is wanted should be asked for in simple terms and be definite.

3. *Correct expression*.—There is always considerable danger of committing grammatical errors in free and ready questioning—the mind is mainly concerned with the subject of the question, and its adequate expression and grammatical accuracy are more formal than essential so far as the purpose of the question is concerned. The teacher should make special note of the necessity for consistency in singulars and plurals, of the proper sequence of tenses, and of congruity in the use of the pronouns.

4. *Good articulation*.—The teacher should at all times articulate with the greatest care. But in oral questioning, good articulation is imperative. It is to be remembered that the pupils have to grasp promptly an idea expressed in a very few words and without context. Bad articulation suggests wrong words and leads to doubt, perplexity, misunderstanding, and error. Careful enunciation

is still more vital when a shade of thought is to be expressed, or a subtle, odd, or special idea brought out; in these cases, satisfactory answers are as much dependent upon clear articulation by the questioner as upon the close attention of the students.

5. *Promptitude*.—There should be no hesitation in framing particular questions, nor should there be any break between successive questions. As there is nothing of interest to the students during any such interval, their minds will promptly begin to wander, and restlessness will be quickly set up—better not question at all than leave gaps.

6. *Definite purpose*.—Questions should not be haphazard or disjointed, or they become largely purposeless. A proper sequence of questions leads up to an elucidation, or a case for elucidation, or to a solution, or revises facts which in the sum represent a connected chain. Questions thus become, as it were, punctuated divisions in an investigation or a narrative, and when the pupils know that a chain of questions is always meant to lead to a definite conclusion, they regard the questioning with the same interest that they evince towards the actual teaching.

7. *Adaptation*.—The intended course of a series of questions is always subject to the effect of the answers received. There are many degrees between the precise answer that is wanted and the answers that will be received. Students' answers will present variants neither true nor false, odd points of view, and even new and unexpected aspects and side-lights together with misunderstandings and errors. None of these, as a rule, can be discarded; they should be seized upon and modify or even change the intended direction of the questioning. The teacher, therefore, must adapt himself unhesitatingly to the kaleidoscopic situations thus presented, turning aside here and coming back there, and all the time moving towards the definite goal that the questioning is intended to reach.

8. *Not optional*.—Questions may be proposed in many ways, according to the circumstances and the teacher's temperament. Some may be presented in apparently optional terms, others suggestively, others persuasively, and so on; but behind all the verbal presentations there should always be a real intention—the intention that the questions are not to be optional but are, in fact, put to be answered.

There is nothing that requires greater skill in the teacher than oral questioning; the art calls for long and careful practice. As a

General Cautions and Suggestions further assistance, therefore, a number of general cautions and suggestions are now presented.

The maintenance of mutual respect between teacher and taught is essential, and some cautions, which the teacher should observe, arise. It is easy for the teacher to ridicule a careless, absurd, or culpable answer; but he should scrupulously avoid doing so; ridicule offends the individual, who feels that his inferiority, of both position and ability, gives an unfair advantage to the teacher. If the teacher abuses his power, he acts tyrannously, and the sense of injustice raised in the student's mind may very well cause him to give up his studies altogether; no venial fault in a student would justify any such consequences. If the ridicule should also be supported by some or other of the students, the result is likely to be more certainly disastrous; whilst if it is resented by them, their confidence in the teacher is definitely shattered or undermined. Of similar effect is the attempt to inflict censure for such answers, unless it is patent to everyone that it is thoroughly deserved. Righteous anger, or even reproach, may be indicated at times, but it must always be shown with strong personal restraint, sincerity, and dignity. And just as absurdities in the pupil are undesirable, so are they in the teacher. Hence, absurd questions, foolish statements and comments, ambiguities and traps should be scrupulously avoided: their effect is bound to be belittling and, therefore, injurious to both teacher and taught. Matters upon which the teacher is himself ignorant or uncertain should be avoided, unless it is made clear that the question is asked definitely for the teacher's information. It is absurd for a teacher to pretend to be infallible, but, at the same time, some discretion and reserve should be observed, especially by young or inexperienced teachers.

Between the extremes of very difficult and very simple questions are many degrees of difficulty and of simplicity. Difficult questions, as such, are not to be avoided so long as they are reasonable, but they should be used sparingly, as their stimulating effect upon the able is more than liable to be off-set by the discouragement of the weak. If the aim of the questions is right, there will be little need to think much about their relative difficulty. A last suggestion under this head is, not to abstain from asking questions to

which an obvious answer must be given. Students are liable to get some very curious ideas, and to have some very surprising prejudices; a simple question, too, gives opportunity to the less brilliant to participate in the answering which otherwise they might be unable to do. It is only necessary to observe reasonable caution to prevent the students feeling that the teacher either is trifling or is treating them childishly. These simple questions should almost entirely be confined to essential or vital matters.

Usually, when the teacher first comes into contact with a class, there are various means of localising the general stage of advance-

**Preliminary
or Localising
Questions**

ment without having recourse to any specific investigation, by means of either written or oral tests. Thus, with beginners, complete ignorance should be assumed; whilst, if a higher stage of work is to be commenced, previous records, syllabuses, or examinations will form the best criteria—and there are few cases in which such definite data, in whole or in part, are not easily available. When, however, an emergency has been the cause of change in the teaching, the new teacher may not be able to ascertain very accurately, or even approximately, what work has been accomplished: a brief record of work done by the predecessor may be worthless, because of the summarised entries being matters of interpretation. In such cases, it is better to get to work upon a definite subject than to add to the students' misfortunes the loss of time involved in a written or elaborate test. It must be a very anomalous subject in which the teacher cannot find some general topic of value and interest which he can come prepared with, and which he can reasonably assume will be either unexhausted or new to the pupils. Once in contact with the class, the prepared lesson should be given, and any incidental opportunities arising during the course of its delivery may be seized, in order to ascertain something of the standing of the students. A few minutes of the class time reserved at the end of the lesson will suffice to enable the necessary queries to be completed. The advantage of such a course is that the students do not go away empty or with the feeling that their time has been largely wasted. In a practical subject, the character of the last work done, or of the work in hand, will generally suffice to indicate what has been taught. Where it is decided to make the investigation before commencing upon any instruction,

oral questioning should certainly be preferred to a written test. The oral test is quick and can be made to traverse over a considerable amount of ground, whilst the written test cannot be of much value unless, say, it occupies at least two hours, and then the results cannot be ascertained until the lapse of further time involved in marking the papers. An oral test should be largely comprised of leading and fundamental questions, should be brief, and should be followed promptly by the delivery of a definite lesson. The latter suggestion, obviously, involves the assumption that the teacher can deal with a topic, impromptu.

Oral questions are an excellent—and necessary—means of ascertaining whether the instruction has been properly understood.

For this purpose, questions on matters of fact are

Test Questions of no value. What is wanted is a series of questions on the application of the matters which

have been treated in the teaching, on the solution of a proposition, on cause and effect, on logical reasoning, on typical cases, on additional illustrations, and the like. Of course, in some subjects the best test will be a written exercise, but even in a mathematical subject there is abundant scope for testing the teaching at all stages by means of oral questions. The time—economy and capacity—value of oral questioning should always be remembered.

One of the best and most effective instruments to secure attention is interest. Where the natural interest of the subject, or the vivid presentation by the teacher, or any other factor of the moment suffices to maintain the requisite attention, extraneous or other aids are

Disciplinary Questions

superfluous. Not all subjects, however, can be made interesting. Education is not a subject of entertainment, and its utilitarian and necessary aspects must be always recognised. It is essential that subjects actually “uninteresting” in these senses, shall be taught, and then the teacher must fall back upon other means of maintaining attention apart from the question of interest. An invaluable agent is the disciplinary oral question. Its purpose is to compel the attention by calling upon the individual to make a definite effort, and the more “uninteresting” the subject the more frequent and numerous should be the disciplinary questions. Such questions may be of any kind—a request to state a fact of knowledge, a question of cause or effect, a deduction to be drawn, an application

to be made, an example to be given. Every question has three disciplinary effects, viz.—

1. *It is an imperative force.*—People involuntarily turn or pay attention to any question which they hear, especially if it is unexpected. This attention is given without the mind forming any decision as to whether the question has been addressed to any particular person or not, and hence, for example, a single question that has been heard may cause an entire audience to pay attention, even though many individuals were in conversation at the time. There is, of course, the converse case—that a question may be put without inducing any attention whatever. In such cases, pre-occupation or a counter-attraction are stronger influences at the moment.

2. *It compels mental activity.*—An effective question compels a double effort—that of comprehension and of answer. Oral questions should present no difficulties of comprehension—the pupils should not have to ask themselves “What does he mean?” The mental effort called for in this respect should be a minimum. Given that the question, then, is comprehended properly, the pupils are, naturally, predisposed to formulate some answer. Some train of thought must be set up, and if there is proper attention, that train will be along the lines of the question and directed towards its answer. Whether the answer is forthcoming or not is comparatively negligible, so far as the purpose of a disciplinary question is concerned; attention and effort are the objects immediately desired.

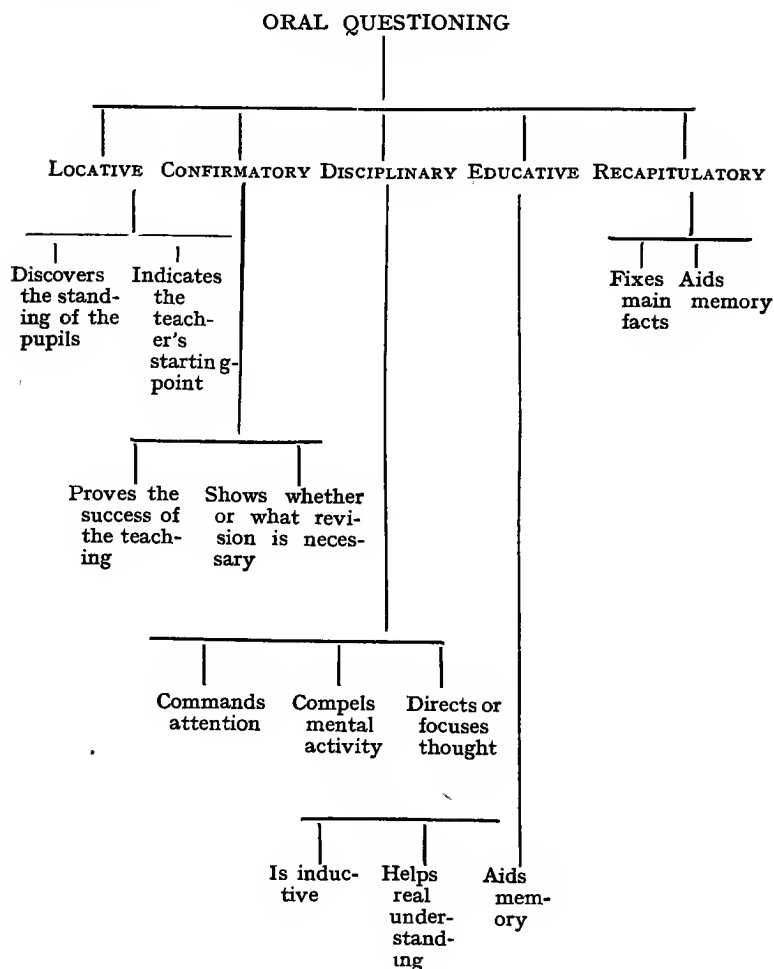
3. *It directs thought.*—The first effect of a verbal question which secures attention is to focus the mind. Pre-occupation, alien thought, prolonged thought upon a previous matter or idea are arrested, and the idea proposed is substituted. Hence, oral questioning defeats mind wandering and whips up dilatory thought. If the teacher, therefore, has a feeling that the attention is weak or less than it appears, he should at once change from instruction to questioning, interpolating one or more leading questions, and then resuming the instruction.

It should be observed that the disciplinary effect of oral questions is not confined to those to which an answer is desired; it is equally applicable to the oratorical question, and often the latter will suffice and thus prevent a definite break in the instruction,

In the preceding chapter, attention was called to the educative value of inductive teaching, and it was pointed out that this was the fundamental method of educating. The method can only be practised by the use of oral questioning. **Instructional or Educative Questions** Socrates, the great Athenian teacher (470-399 B.C.) employed no other method: he told nothing, but began and ended with oral questions, now making his students or hearers contradict themselves, now making them answer their own queries, now leading them to make discovery of fresh ideas. The method of educating by oral questions is, therefore, known in pedagogy as "the Socratic method." It is inadequate for many purposes—for all the purposes of "instruction" as distinguished from "educating"—and must, therefore, be confined to its legitimate sphere. When carried out extensively, it is certain to lead to *dialogue*, which, in teaching, produces the attention of one student and repels or discharges that of the rest of the class. The slightest tendency of the instructional or educative question to become dialogue should be a warning signal to the teacher, and he should extricate himself at once.

In all teaching, recapitulatory questions are essential. A lesson or a difficult stage of a lesson should not be concluded without some questions on the leading points. Memory is strengthened by every repetition of a fact, and the first repetition should take place there and then, whilst the students are still fresh to such facts. The second repetition should be prior to the commencement of the next lesson—a few minutes will, in general, suffice. Recapitulatory questions should not be detailed or laboured. It is frequently only necessary to suggest the main fact or idea to be remembered, and this will suffice to restore the remembrance of a whole chain of facts. These questions, therefore, should be leading ones only—essential facts, root ideas, the crux of a problem. **Recapitulatory Questions**

Summary. A summary of this important chapter may be presented in diagrammatic form—



CHAPTER IX

DEMONSTRATION

**The Senses
as the Agents
of Cognition**

THE loss of any one of the five senses—sight, hearing, touch, taste, smell—is a serious physical misfortune in a human being; at the same time, the senses are not all of equal importance, and whilst the loss of sight is an incomparable one, loss of taste or of smell is comparatively a mere inconvenience.

It is the function of the five senses to be the instruments of a creature's cognition: through them the facts of the external world are conveyed to the mind, and by means of the mental faculties, are duly "comprehended" or known. In a general way, everyone recognises the great importance of the senses, but something more than this is necessary for the teacher. One of the conclusive indications of the inexperienced teacher is the fact that, although the five senses are all instruments of cognition, and in their respective degrees all necessary, he practically makes use of only one of them—the ear. This is not mere negligence or accident: it is the natural thing for an inexperienced teacher to do, and merely illustrates that a natural impulse or tendency is not a sufficient guide to the best action. The ear is the instrument of cognition by sound, and the voice the instrument of expression by sound. They are the essential agents of human intercourse, and their importance arises not only out of their indispensability. The teacher who employs them exclusively as the vehicles of his teaching, really does so because they are the *most direct* vehicles. It is usually inconvenient, on the one hand, and unnecessary on the other, for any of the ordinary objects of external existence to be placed before anyone's eyes in order for him to recognise them—he has seen them so often that a mental picture is formed in the mind, of such precision that the mere mention of their names (reference through voice and ear) is sufficient to recall all the essential features of their complete cognition. Hence, for all ordinary purposes, it would be a pure waste of time, and ridiculous, for a teacher to produce a horse for inspection before he proceeded to discuss it; to sound a motor-horn before speaking of it; to make

all his pupils smell pepper or taste tea before proceeding to refer to them in his teaching. Yet a class in saddlery, in sound, in grocery commodities, and in tea-tasting respectively, would require to examine, visually and otherwise, the correlative objects mentioned for such purpose the ordinary cognition would be quite inadequate; and hence, mere verbal reference would be worthless.

Ordinary cognition of objects depends entirely upon a more or, less broad and comprehensive cognition of their physical qualities. Thus, we "know" or identify things by their physical properties of colour, size, shape, weight, sound, smell, or by combinations of these, and it is a fortunate characteristic of our ordinary requirements that we do not need more than a general and superficial cognition.

John **The Prime Sense of Cognition** ~~Despite the natural tendency of the inexperienced teacher to~~ rely upon the sense of hearing, and, hence, to confine himself to description and other forms of verbal statement, the most important sense of cognition is sight and not hearing. Colour, size, and shape are the

physical characteristics upon which most of our cognition is based—grass is green to us, and not a light or a soundless substance; a triangle is a three-sided figure, and not a figure with three angles together equal to two right angles; a mansion is a big house, and not the residence of a knight or a squire; pepper is a powdered condiment, and not a very pungent substance that particularly irritates the olfactory sense; and so on; there are comparatively few ordinary cognitions which are not primarily and sufficiently recognised or "known" by the sense of sight only. And not only so, but whenever we want to verify or identify a thing, the first request we make is almost always: "Let me see it." The doctor does not usually prescribe for a patient without seeing him; neither does a merchant usually buy an article without seeing it, whilst, if he does, he protects himself by making the contract subject to confirmation after visual examination; and so on in a thousand ways we demonstrate that our fundamental sense of cognition is through the eye. In teaching, recognition of this is made in the importance which is attached to "hand and eye" training in children, and to demonstration and experiment in scientific and technical instruction. Yet, although these are now commonplaces in educational practice, it is extremely difficult to

gauge their precise application and the degree to which they are to be employed in particular cases.

Ubiquitous in the classroom is the blackboard. In the lecture-room, in the laboratory, in the workshop—wherever teacher and pupil meet for instruction, the blackboard (with its accessories) is the one piece of apparatus which should unfailingly—and usually does unfailingly—present itself. And so it should be ~~every time~~

**The Blackboard
the Teacher's
Stand-by**

~~and all the time, the blackboard is indispensable. Yet it is the worst used and the most neglected piece of apparatus that is employed in the whole gamut of instruction.~~ If an example is to be worked with the class, the blackboard should receive it; if a diagram is required, the blackboard, again, is to be requisitioned. Less frequently, but equally necessary, the blackboard is to be used as the visualising agent recording the spoken word. It should be the teacher's practice to present to the eye, as well as to the ear—to make full use of two senses instead of relying upon one—the essence of the idea expressed or a terse statement of the argument made; to note for memorial purposes a term or a definition, a phrase or a figure, a comparison or an illustration. Placing these distinctively, effectively, and opportunely upon the blackboard, ensures that they shall come to the eyes of the students at the right moment in order to combine visual with ear impression and make clear and lasting the knowledge which it is desired to convey. The teacher should not try to emphasise the importance of even fundamental facts by urging his students to remember—the common phrases, “Now note that carefully,” “Always remember that,” “Always bear that in mind,” are to a large extent platitudes. With all the desire in the world to accept and carry out the precept, pupils will find that the facts won't stick; the impressions fade, or fail to revive at critical moments. Fundamental facts tersely expressed, should always find their visual presentation on the blackboard there and then, and in due course also, they should be translated into the students' note-books.

**Specification
of a**

Good Blackboard The blackboard is provided by the school authority, but, usually, every consideration is given to a requisition for special features desired for exceptional uses. Under mistaken ideas of special need or convenience, teachers of special subjects not infrequently

requisition blackboard adaptations which are more hindrance than help, and which are even bad for teaching purposes. Besides special conveniences—necessary or imaginary—there are, however, many features about blackboard requirements which are extremely difficult to satisfy, and which are largely not met even in the best and most carefully designed blackboards.

Many materials have been employed in the construction of blackboards—wood, paper, cloth, slate, ground glass, and compositions of various kinds—and none is found perfect. Then various colours—grey, slate, black, green—have been used, and it is difficult to say which colour, all things considered, is the best. The difficulties of making a really good specification for a blackboard may be best illustrated by stating some of the most important requirements. These include—

1. Durability of material.
2. Suitability of material to take and show up well the writing material—chalk, both white and coloured.
3. A surface that will not focus and reflect light so brightly that at certain angles the blackboard is nothing but a shining reflector.
4. Permanency of surface, so that, with use, it does not become pitted, scratched, polished, white, greasy, excessively smooth, blistered, etc.
5. Easy portability, so that it can readily be placed in any desired position, especially by teachers who are not physically strong.
6. Maximum area of writing surface, to which easy reversibility materially contributes.
7. Storage capacity, so that the blackboard can at one and the same time provide for the retention of written matter which is required to be preserved for a period, and yet yield space for other written matter to be placed upon it in the meantime.
8. A good cleaning surface, so that writing can be removed completely and easily.

With such almost irreconcilable functions to serve, it is not surprising that there still exists a "blackboard problem," which awaits solution. The specification of requirements is easy, but material, design, and finish are the unsolved difficulty.

Familiarity with the blackboard makes one inclined to say that the best board is really the unruled one. Class time is always all too brief, and ruling for immediate needs always seems a great waste of precious moments, but, in the long run, it is probable that the unruled surface is most economical and most helpful. Even simple horizontal ruling is frequently a great nuisance—more or less line space is often needed, and oftener still a free surface altogether is essential. Other rulings of a more complicated nature, such as small squares and tabular forms, hinder as much as they help. Worst of all is the board which is not only ruled in tabular form, but also has painted tabular and margin headings. These, in practice, make the teacher the slave of his blackboard instead of its master: his blackboard work is to all intents and purposes a fixed chart, which by its very nature prevents or pre-disposes the teacher from using it as the ready instrument of visualising and illustrating, of teaching and demonstration. The idea of having a blackboard ruled on one side and plain upon the other would appear to be an obvious compromise: in practice, reversion is neither easy nor convenient, and is, therefore, avoided, with the result that an unsuitable surface is made to serve all purposes or else the blackboard is entirely neglected.

Coloured chalks or crayons have a necessary function at times, and should, therefore, be provided as a recognised accessory to the blackboard. The one outstanding use of coloured chalks is to elucidate drawings and diagrams: they serve no purpose otherwise, and, hence, it is a waste of time and material to employ them for the ordinary purposes of writing. To be easily understood, drawings and diagrams, especially if complex, cannot be sufficiently represented by variations in thickness of line or kind of line (such as regular and broken), nor by labelling with letters or names. Any effort to interpret or disentangle lines will involve more or less confusion of mind or abandonment by the students. In very involved drawings, combinations of colour and form of line may have to be utilised.

Coloured chalks are universally made up in assorted boxes, the colours being, usually, red, blue, yellow, green, chocolate, and violet. This is a great mistake and largely neutralises the value

of the colours. For most practical purposes, white chalk and three colours are ample, and, in practice, the reds and blues are used up first, and the remaining colours wasted because they are unsatisfactory. Boxes of single colours should be supplied, and the selection of colours should be left to the teachers who require them. It is difficult to get colours that will stand out well and clearly in artificial light, and even if there were a good variety of these, too many colours make confusion worse confounded. The best distinctions are gained by few colours combined with variation of line and shading. The essential differences, contrasts, and distinctions only should be made to stand out prominently, and unessentials should be undistinguished: there should be no differentiation without function, and where differentiation is made, it should be carried out on a consistent plan, as well as being confined to essentials.

Legibility of blackboard work is essential. This involves questions of texture of stroke and size of character. The need or desire to get a large amount of matter upon the blackboard at any one time should be subordinated to the necessity for clearness: however valuable the matter in itself, it is worthless if it cannot be read by the pupils—reading aloud by the teacher is no substitute. To secure legibility, the strokes should be firm and with plenty of chalk upon them, and the size of character should be such as can be easily distinguished by the most distant student. Even when both of these requirements have been met, it may be necessary for the teacher to assure himself that the light falling upon the board does not make it invisible at certain positions, nor must he trust to the voluntary mention of this invisibility by the students—he must learn the best positions in the room, and even then constantly assure himself by the verbal confirmation of the students that what is written is really properly visible to them.

Writing and Writing Position

In placing matter upon the blackboard, the teacher should be careful as to how and where he stands. He should, as much as possible, avoid placing himself in *front* of the board, and should sacrifice his personal convenience in this respect first. The pupils should be able to see *all the writing all the time*, and not have to be craning round the teacher's figure in order to see something, the view of which he is interrupting. Hence, the blackboard should, in general,

be placed towards the left side of the class from the students' position, and the teacher should keep himself as much farther to the left as possible: if the board is a fixed one centrally in front of the class, both the teacher's writing position and the incidence of artificial light require constant watchfulness. In securing good texture of stroke, it will be found very helpful if the chalk is held between the thumb and the two next fingers, and the top end is kept well in towards the hollow of the hand and not allowed to project outwards from between the thumb and the forefinger.

Blackboards should be frequently washed with clean water, and when dry should not show any smudges. This cleaning should not take place when the blackboard is in use, as it takes some time for it to dry. For cleaning the board during use, there is nothing better than a cloth duster. Felt pads mounted on wood, string dusters, and other forms of cleaners may make less dust, but they are not to be compared with the soft cloth duster for efficiency. Obviously, the teacher should take reasonable care not to make more dust than is avoidable. The upper and central portions of the board are the most useful, and, hence, these will be the portions that oftenest need to be cleaned.

References have already been made to some forms of misuse of the blackboard. Another common form of misuse amongst weak and inexperienced teachers is to prepare a board full of matter before the students enter the classroom. In some cases, this will take the form of diagrams; in others, it will be a board full of notes to be copied down; and, yet in others, it will be worked examples or examples to be worked during registration, or the like. Preparation of the right kind is admirable, and betokens a sense of duty, earnestness, and praiseworthy devotion. Preparation of the kind mentioned, however, betokens wrong ideas, wrong method, and inefficiency. Continuation students are technical students, and drawings, for example, are as important as the facts of knowledge that are taught during the lesson. Such students need to know how drawings are built, and the why and the wherefore, which cannot be satisfactorily taught by merely directing attention to a completed diagram and pointing out the various parts. The students need to build up the drawing in their note-books along with the teacher's building

Blackboard Cleaning

Misuse of the Blackboard

up of the blackboard sketch. The teacher who fills up the blackboard with notes prior to the lesson deserves dismissal on the spot for utter incompetency; for if the teaching is merely to be the copying down of notes, with or without explanation, the pupils might as well remain at home and have "correspondence" papers sent to them: they would make more progress with notes to study carefully at their convenience than by making laboured attempts to copy hastily and fully from a blackboard placed six or seven yards away from them. As regards written exercises for the students to work during registration, etc., it would be better to have oral work done should there be a waiting interval before registration can take place, and also to attend to any organisation or other details which, if left, would take up time during, or at the end of, the lesson. Every earnest teacher deplores the time wasted in registration, especially if the class is of any considerable size; but the total effect of giving exercises to work during this period is to lengthen the amount of time required for the registration, and to encourage time-wasting and inattention by the lazy or indifferent members of the class. Lastly, to prepare on the blackboard worked exercises is tantamount to shouting from the house-tops that the teacher is unable to work the exercise with the class, and has, therefore, copied it out from a book or from his notes.

It is convenient to differentiate a demonstration and an experiment: in the former the teacher shows how a thing is done, how a thing acts, etc., and thus a demonstration is primarily for utilitarian or informative purposes.

Giving a
" Demonstration " An experiment by the teacher is not primarily for practical application at all, the essential purpose being to test, discover, prove, confirm, refute, or the like; *i.e.*, it is an investigation.

From what was said in Chapter VII, it will at once be recognised that the normal method in demonstrating is that of deduction. It will, therefore, be necessary to refer to the doing of this or that, and to the necessity for refraining from something else. Precept and caution will be the rule. Nevertheless, it may be unhesitatingly said that no demonstration should ever be given entirely on the deductive method. There will always be opportunity for such inductive questions as: What would be expected under such and such conditions? Why was that constructed so and so? Is that economical or convenient, or desirable, or objectionable, etc.,

and why? What would one have expected? What is the cause of such and such an effect? These and many other enquiries will serve to transform a colourless, or monotonous, or wearying demonstration into an active and interesting and educative one. Before giving any demonstration, the teacher should make a careful study of what inductive teaching the subject admits of, and he should particularly seize upon those points which most effect a real understanding of basic principles; the questions then decided upon should be asked at their appropriate places in the course of the instruction.

Although a demonstration is fundamentally easier to give than an experiment, yet a really good demonstration is by no means easy. What to show, how to show, what to describe, how to describe, when to repeat, what questions to ask, what precepts and cautions to give, and many other points arise, to say nothing of the maintenance of attention and interest, drawing of diagrams, taking of notes, and the practical work which the students themselves should perform. The following points should be particularly observed—

1. The students should be arranged as compactly and near as possible, so as to get a complete and clear view.

2. The demonstration itself should assist in this (*e.g.*, the apparatus, etc., should be raised to the most convenient height, should be of good size if admitting of choice, and should be towards the class if admitting, the teacher demonstrating from behind it).

3. Time and attention should not be spent upon parts which are invisible from their size or inaccessibility; if these are important, the students should examine them closely, if possible, and a sketch in illustration should be made upon the blackboard. It may, indeed, be better to divert attention entirely to the blackboard instead of to the object in such cases.

4. Essentials only should usually be treated; too many details at once are wrong.

5. Only necessary repetition should be made: to repeat merely to spin the demonstration out is weak in the teacher and has a bad effect upon the class; to repeat simply because an effect is entertaining is to turn the demonstration into a mere show.

6. If the consumption of power or materials is involved, regard should be had to efficient economy; much waste may easily occur,

which is not only culpable in the teacher, but is almost certainly realised by the students and placed to the teacher's discredit.

7. If the demonstration is to be followed by practical work by the students, any points requiring special attention or care should be effectively impressed.

8. The demonstration should never be left without an adequate statement in writing being made by the students: this is necessary both for economy of demonstrations and for memorial purposes by the students.

9. Where skill in manipulation is requisite, it should be possessed by the teacher, but not obtruded; it is seldom that the purpose of a demonstration lies in a mere exhibition of skill. Conversely, mere lack of skill should not be apologised for—it will be patent to the students, and the least said the better.

10. The demonstration should have a definite object, and it should be made quite clear to the students what that object is; in pursuance of it, there should be no avoidable deviations and no side-tracking.

In conducting an experiment, the teacher should utilise fully the inductive process, making it a really educative instrument.

Skill in questioning is essential to good teaching,
Experiment and the kind and form of the essential questions should be most carefully considered beforehand.

Above all, the questions should lead unswervingly to the final object, and should grip principles, causes, and conclusions.

Many of the details of the method of conducting an experiment are identical with those of conducting a demonstration, but some special features should be noted. For example, it is fundamental to remember that procedure or manipulative details will usually have no direct bearing on the purpose of the experiment, and where that is so, the pupils should not be distracted by them, whether by specific reference or by cumbersome or bad manipulation. If such details have significance, then any contrasts, or variations, or other effects should be clearly illustrated, and the requisite distinctions drawn. Again, no experiment should be undertaken unless the preliminary foundation of knowledge has been laid, and the precise assumptions, starting-point, etc., have been clearly indicated. The object of the experiment should be unmistakably indicated, persistently kept in view, and never allowed to become obscured.

Too much care cannot be taken in indicating precisely any limitations, exceptions, false assumptions, analogies, conclusions, etc., and, in particular, what is not proven should not be claimed, nor defects of experiment made to square with theory or fact—reconciliations, if necessary, should be properly discussed and then effected.

CHAPTER X

CLASS ORGANISATION AND ADMINISTRATION

COLLECTIVE instruction is necessary on grounds of economy, and desirable in itself on account of its educational and social advantages.

Student Classification

Satisfactory classification is, however, a condition of its success, since defects therein, like unclean seeds, are latent evils that will in due time vitiate the crop. Clean classification, like clean seed, goes a long way to eliminate both weeds and weevils. The elements of good classification comprise questions of educational attainment, age, and sex. Occasionally, other factors may require consideration, such as social status, nationality, religious denomination, and the like, but they are, happily, abnormal, and blot, when they do arise, the finest characteristic of all education—catholicity. It should, perhaps, be pointed out that classification has nothing to do with number, which forms a separate question.

The prime ground of classification is, undoubtedly, educational fitness. This comprises two elements—general educational capacity,

(a) Educational Fitness

and state of knowledge of the particular subject which is to constitute the class work. Defects of classification arising from either element produce similar evils—inability to profit by the instruction, discouragement to teacher and taught, loss of students both fit and unfit, unsound progress, jerky and limping teaching, excessive corrections to homework and other exercises, and excessive failures and deceptive successes at examinations. Conversely, where students are educationally fit, the standard of work is highest, progress is sound and rapid, and smoothness, satisfaction of teacher and students, and maximum success result.

As a secondary instrument of classification, age is admissible; as a main basis, it is bad. The reasons are not far to seek. There is a rough approximation of general intelligence

(b) Age

corresponding with a given age, and the chances of evenness of general educational attainments are of the nature of an average. Hence, where the subject is entirely new and self-contained (*i.e.*, does not rest upon a necessary

basis of preparatory training), age may suffice for a preliminary sifting or arrangement. But even under these conditions, there are so many important elements of divergence that no reliance can be placed upon age selection. When the question of numbers arises, it often interferes with the wisest efforts at satisfactory classification, and here a preliminary grouping may be made by age. But the real importance of age in classification lies in its convenience in defining limiting extremes. It is sometimes necessary to exclude students below a given age, and the grounds therefor may be sound enough in themselves; they should, to be justifiable, however, be of the nature of a *force majeure*, and, therefore, absolute. It is less frequently necessary to consider a maximum age. The consideration, however, may be important, such as in the case of women, and where the age range may tend to become excessive unless a limiting line is drawn. The well-meaning spinster of 40, or the conscience-smitten man who has neglected earlier opportunities, are alike disappointing students and sources of difficulty. An upper age limit may, in fact, be only justice to those who are of suitable age.

The question of mixed classes is contentious. Admittedly, the subjects in any specific curriculum may comprise some which do not appear to present any reasons against their being taught to mixed classes under such conditions that both sexes may be able to make level progress, and neither require special consideration. But this is more an academic uniformity than one that, in practice, actually exists. Writing deliberately, at a time when he has had a wide experience of mixed classes in many subjects, and has also conducted special war emergency classes entirely for women (classes which have proved the happiest, heartiest, and most concentrated hard-working courses he has ever known), the author is convinced that mixed classes of continuation students are wrong, and, therefore, that classification on the basis of a separation of the sexes is sound. There are obvious differences in the educational aspects of the two sexes which serve to make such substantial differences as to justify the claim to incompatibility for teaching purposes. Thus, the early education of girls is different from that of boys in so many respects that even in mixed day school classes there is not sufficient common ground of equality to make their cases

parallel, whilst the objects of the early education are fundamentally different from those of continuation education. Again, the purposes in immediate view, the qualifications aimed at, and the more remote and ultimate spheres of life, make the continuation training of the sexes fundamentally and substantially different. So real are these divergencies that it is quite unnecessary to raise the old polemical question as to whether or not women are the mental equals of men. The only substantial grounds for mixed classes are those cases in which the numbers involved do not admit of separate classification, or where questions of staffing are decisive.

After what has been said in the chapter on "Imparting Instruction" (marginal heading, "Teaching is an Art, its Rules, 1"),

**Ascertaining
Educational
Fitness**

it is not necessary to re-discuss here the question of ascertaining educational fitness. It may, however, be stated that, in view of the sadly limited time at the teacher's disposal in the course of an

ordinary continuation session, it is highly desirable that as much as possible of the work of selection should be done before the class meets for instruction, and that, if an examination test is found desirable or necessary, this should take place under such conditions that it does not involve the sacrifice of a class meeting.

The size of the class is a matter of fundamental importance. There should only be one aim in view in class organisation—the aim of the maximum efficiency of the instruction.

Size of Class

Grounds of economy are not a sufficient excuse for large classes, nor is the idea of keeping a reserve against an inevitable decrease in numbers, tenable. It is practically certain that the larger the class the greater in proportion will be the lapses, whilst, on the contrary, the fixing of a maximum limit not far removed from that which might be regarded as also the desirable minimum, offers every inducement and security that the numbers will be maintained. Some latitude in numbers, of course, is obviously necessary, as the duplication of a class naturally doubles the cost; even in education some elementary business considerations must prevail.

In State-supported institutions, the size of classes is subject to definite "Regulations," forty being the normal maximum for a class for theoretical instruction, and twenty for one for practical

instruction. When the same students attend for both kinds of instruction, the difference becomes at times a serious problem, since it may involve three practical classes for one theoretical one. Obviously, however, in these cases there must be some compromise, and even Departmental Regulations must give way. From the teacher's point of view, the question of size of class may, on the one hand, be a matter of personal indifference, or, on the other, it may be a question of acute importance. A teacher of strong personality and capacity may be indifferent as to whether he has, figuratively speaking, 40 students or 400; but there can be no question that, even with a strong teacher, a large class is educationally wrong, and is bound to result in a real loss of efficiency. The case of a teacher of weak personality or capacity may mean teaching suicide, even when the class is restricted to the normal maximum.

So far as possible, the disposition of the furniture of the classroom should be primarily considered with a view to the particular requirements of the subject or subjects to be taught therein. As, however, continuation classes are usually taught in buildings which are also used for day classes of a different type, it may not be possible to make the dispositions that might otherwise commend themselves. Nevertheless, it is worth urging that some consideration should always be given to the room arrangements, and that, within limits, changes should be effected for evening classes where they would lead to the comfort or convenience of the work for any particular evening. Real inconvenience frequently follows from the fact that the seating accommodation is often designed for children, whilst the evening students are adults. Beyond selecting the rooms used by the older day scholars for the adult evening students, little can be done in such cases to adapt matters; nevertheless, that little should be effected.

Other things being equal, the size of the room should be suited to the size of the class to be accommodated in it. Too large a room is a nuisance, and invariably the students will, until requested to concentrate themselves, scatter over the whole available space. In such circumstances, the teacher should not have a moment's hesitation in requiring his own dispositions to be complied with, and thus effect the necessary compactness. The opposite evil of

overcrowding is more undesirable. Classrooms are built to a specified accommodation, and the air space is not adequate for more. In fact, considering the greater requirements of adults, it is hygienically desirable that the actual accommodation should not be entirely filled. Acquiescence in overcrowding, therefore, should not be accorded until every possible means have failed to secure an adequate room.

The students should be arranged so as first to fill up the front accommodation, and then they may be distributed farther and farther towards the rear as required. There should be neither too great depth nor too great breadth when there is any spare space at all; nor, on the other hand, should there be any crowding. Desks intended to seat four day students should be allowed for three adults, so that each individual is comfortably clear of his neighbours. Since much of the work of continuation teaching is done with artificial lighting, the internal conditions are of more importance than the incidence of light from windows, and, hence, readjustments of seating, as compared with day conditions, may be necessary. This is best ascertained by the teacher personally going round the room when the lights are on and testing the incidence of the light on the blackboard from various positions. In cases where the blackboard is fixed, it may be necessary to have a screened light directly above and in front of it; where it is movable, the best position should be found experimentally and adhered to. If the teacher does not look to this himself, he may find to his surprise that diffident students will repeatedly have positions from which they are quite unable to see what is written on the blackboard, and will refrain from asking to be allowed to move. With a fixed position of the board, students, generally, will soon discover the best positions for seeing if there is a choice; but even then it may be quite a long time before the knowledge becomes general: hence, if the teacher knows absolutely, he can ensure that the impossible seats are unoccupied. Finally, it may be mentioned that the class should be rather towards the teacher's left and the blackboard towards his right when facing the class, so that, during blackboard writing, the maximum number of students can have an uninterrupted view. The teacher himself should always keep as much away from the front of the blackboard as possible.

Just as catholicity should be a superlative characteristic of all education, so should etiquette be a universal characteristic of the classroom. The external marks of refinement are not mere trappings; they indicate the reality of the refinement which education should effect upon the mind and character. The teacher, therefore, should never neglect the little courtesies and kindly considerations which bespeak the true etiquette. Whilst making allowances for the social status of his pupils, and not straining etiquette beyond what will retain their appreciation, the standard set and maintained should, nevertheless, always attain something above what would merely be deemed good manners by the students themselves. For example, it is never too much to ask students if an open window makes a draught; if distant ones can read the blackboard writing quite easily; if anyone could "kindly" lend a book or other article to another student, and to thank him for so doing; if one would be "good enough" to oblige by fetching an article that may have become necessary; if another "would mind being kind enough" to change places for the benefit of someone else; if "our good friend Brown" is being kept late at work or is ill; if the class would "kindly excuse you" for a moment whilst you are obliged to keep them waiting; and so on. Then, whilst there is a healthy manliness when calling the register in saying "Brown," "Robinson," "Cook," etc., for boys, the forms "Mr. Jones," "Mr. Robinson," "Mr. Cook," for adult males, and "Miss Jones," "Miss Robinson," "Miss Cook," for all girls and unmarried women are quite in good taste; as is also the marking of seniors without calling their names at all. It depends upon the teacher himself whether or not these nominal courtesies are appreciated in the way they are intended. He may depend upon it that, if he has not the real spirit of knightliness within him, he cannot expect to foist its travesty upon his class.

The teacher should study and systematise methods of conducting the routine working of the classroom, with a view to making them of maximum efficiency. Everything should conduce to the maximum possible amount of work, and sources of waste time should be eliminated or reduced to their minimum. Thus, the attendance register should be marked briskly, checked with the number of students present, and closed at the proper time without any

Classroom Etiquette

Routine Efficiency

dallying. Whilst being proof against delusion by culpable lateness, the arrival of students during registration should neither be unobserved nor emphasised. An unrepachable "Hurry up, Brown," "All right, Miss Jones," and a pause in registration whilst the individual gets promptly seated, may be quite sufficient to put individuals at ease and to excuse them; whilst the gentle evidence of the lateness having been observed will operate as a stimulus to early arrival in future.

It goes without saying, almost, that every possible preparation should be made before the time for the lesson to begin. Only the unavoidable should be allowed to interfere with prompt commencement and maintained vigour of work throughout the class period. The collection and distribution of homework should be on a systematic plan. Where the numbers make it worth while, the students should have allocated rows in which to sit, should mark their homework on the outside with the number of their row, and should pass the books or papers to the end of their respective rows for collection. The teacher keeps them in their groups, and on returning them, puts each group at the end of its corresponding row, whence they are passed along to the owners. In this way, a hundred papers can be collected and returned as promptly as twenty. Similar considerations should govern the storing, getting out, and return of apparatus and materials. Nothing should give cause for easing off or waste time.

Reference has already been made to punctuality, but the question leaves something more to be said. The teacher should cultivate punctuality in all aspects. He should always be

Punctuality prompt in arrival, and he should change and close lessons with equal promptitude. Punctuality in changing lessons is particularly important, as otherwise students changing classes may be made late in entering another room; or, conversely, general dilatoriness in effecting lesson changes may develop and grow to deliberate slacking. A system of time sounding or other signal would be desirable, but it is seldom feasible, even in well-equipped institutions, either on account of expense or because the time requirements of classes vary and render a common system impossible. Usually, therefore, the matter is in the hands of the individual teachers themselves, and each should be scrupulous in the common interest.

There should be no red tape in this matter. Obviously, it is a question which is open to abuse, but it should not, in the first instance, be anticipated that any student will avoidably ask to leave before the lesson closes; the occurrence of abuse can be firmly dealt with when it has actually arisen. Nevertheless, the teacher should not overlook the fact that he is entitled to know the general nature of the circumstances making the occasion for early leaving, and where this is permanent, it should be a settled arrangement between student and teacher. In general, there should be no early leaving at all, and an effort should be made to avoid it as far as possible, even in apparently reasonable circumstances.

Early Leaving of Students

The teacher should do everything possible to maintain regularity of attendance. Systematic arrangements for following up absences lie with the general administration of the institution, and are beyond the class teacher's province.

Maintaining Attendance

At the same time, the class teacher should make it a regular and systematic part of his duties to keep all cases under observation and knowledge. Thus, he can sometimes send a verbal enquiry to Brown, or he can ask how Jones is getting on and when he will be well enough to return, and when he does return, he can be assured that the teacher is glad to see him back again; and so on. A register entry in the student's favour, such as "Ill," "Working overtime," may be made in special cases, and the making known of this to him is a personal inducement to his prompt return and also has a good effect upon the class in general.

There are some special occasions during every session which interrupt the normal course of the class work. These occasions

Special Occasions

should be kept under control so as to prevent abuse, and particularly to prevent their becoming an excuse not to do a proper amount of class work if such could be done by means of a little determination and scruple. Two such occasions are the opening and closing nights. An opening night may not be the best upon which to embark upon an essential and fundamental section of the syllabus, but, nevertheless, it should be a night of industry. The teacher should have all his plans and requirements clearly defined, and these, so far as they affect the routine, should be clearly intimated. This done, there should be an orderly and businesslike conformity with any formal

details that may be necessary, such as the filling up of forms of information, etc., and these details completed, there should be a good, solid lesson upon some non-essential aspect of the syllabus, if preferred, although, oftener than is realised, there can be a real commencement of the session's work. A good impression of work to be achieved, sincerity of purpose, and vigour, will give a tone to the class that will require little or no further effort to maintain throughout the session.

The second special occasion—closing-down night—should also maintain the conception of solid work right up to the end. A little patience and determination may be requisite to achieve this, particularly if some of one's colleagues hold different views and actually make the night or occasion a wasted one. It is more than advisable to make the actual lesson slightly shorter than usual, in order to allow of a few minutes for taking formal *congé* of the class. It is not a light thing to take farewell of a class with which one has worked hard and conscientiously during some six months. True, there is nothing lugubrious about it, but it is an occasion when an abiding impression can be made, and it may contribute substantially to the reunion of teacher and students the next session if the teacher heartily expresses his appreciation of the steadfastness and efforts of the students during the session, indicates any shortcomings that such a suitable opportunity may advantageously emphasise, and solicits their return on the re-opening.

Other occasions for slack nights will arise, more or less, and the attitude in every case should be governed by the same guiding principle—that *every* class meeting is an occasion for substantial work, and that substantial work is going to be done. Bad weather, for example, which has obviously contributed to a reduced attendance, should not admit of a comparatively wasted evening by those who have had the hardihood or perseverance to attend. If a non-vital lesson can be spontaneously substituted for the one intended, if that should be an essential one, it would be wise to take this course. Such lesson may prove to be as effective as the one due, and the students will have had the normal full measure without prejudice to those who may have been unavoidably absent. This course is infinitely better than repeating the prepared lesson again at the succeeding class meeting whilst its general effects are admirable.

It is not the province of the class teacher to seek to initiate or to control these. They are, generally, integral parts of the institution's organisation, and the province of the class teacher is to identify himself heartily with them. They are not occasions which are usually or necessarily remunerated, but, provided they are not made occasions for exploiting the staff, or otherwise abusing their loyalty, they should be regarded as essential parts of the duties appertaining to the service. It is to nobody's interest to make these occasions causes of dissatisfaction or friction, and they are, essentially, times when the greatest goodwill is necessary. What, therefore, the individual class teacher can do to contribute to their success is no more than what is due from him. Looked at from another point of view, they contribute substantially to the reciprocal goodwill and esteem of the scholars, and reflect favourably on the actual work of the classroom.

The teacher should look regularly and systematically to the heating and ventilation of the classroom. Cold makes for discomfort, and many people are so susceptible to physical discomfort that, with the best will in the world, they are unable to give their full attention and effort under such circumstances.

Whilst probably less distressing than cold, too warm an atmosphere is equally undesirable. The normal temperature should be from 60° to 64° F., and in cold weather, when a lower temperature may obtain through inadequate effort or attention by those responsible, an effective protest must be lodged should the temperature be much below this range; similarly, if the room is uncomfortably warm through overheating.

Of equal importance with the question of temperature is that of purity of the atmosphere. Perhaps of the two, the latter is more important, because it is characteristically more insidious. One of the best indications of danger-point for lack of sufficient fresh air is the personal sense of effort required to maintain the teaching; and another is any tendency to restlessness, listlessness, or inattention on the part of the pupils. The circumstances should be promptly noticed, as the air has then become substantially vitiated and injurious, and the remedy should be promptly applied. The teacher is particularly liable to suffer on such occasions as his

work involves more or less continuous speaking. If, therefore, he develops a bad throat a day or two after a class meeting, he should at once reflect whether or not he had ignored the symptoms of heated and poisoned air; he will thus make himself more promptly observant in future. Students, after a day's work, are particularly liable to lassitude, and fresh air in the classroom is even more necessary to their vigour and interest than in the case of the teacher. Lastly, when the building has been used for day teaching, it is extremely likely that the atmosphere will be suspect at the time of evening assembly; whilst if the rooms have been swept in the interval between day and evening school, dust is more than likely to be present. Such circumstances should make the class teacher particularly observant and insistent upon the hygienic condition of his room, and at least occasionally he should make it his business to be present some time before the evening opening, in order to make a kind of surprise inspection. He may then find that a negligent or too hard-worked caretaker has driven the sweeping and attention of the room to the last few minutes before the class is due to open.

It is not the province of the class teacher to grant testimonials and references to students; it is the function of the head of the department or of the institute. Nevertheless, circumstances may be abnormal, or may justify the class teacher in furnishing a testimonial or acquiescing in his name being given as a reference.

Students' Testimonials and References

He should be quite clear upon the propriety of his action, and then, if he decides to comply, he should furnish the testimonial or answer the reference with dignity, and as much as possible in the student's favour. In normal circumstances, it is not for the teacher to indicate any failings or defects in the student: a testimonial presented by an interested party is understood to have been given by one who speaks in his favour, and it is for the employer, or other party concerned, to obtain other evidence if he requires it. Conversely, a request for private and confidential information by a would-be employer, or other interested party, must be answered conscientiously, and then it becomes a duty to refer to matters that might otherwise be omitted. In such cases, the teacher should be moderate, and prone to understate the defect or objection, since he cannot govern the interpretation which the enquirer may place upon it. Obviously,

it is the object of the enquirer to ascertain the questionable aspects of the application or case, and he is, therefore, naturally prone to weigh these heavily when they are specified. Where a case stands condemned, the teacher has no option, and must take the responsibility as a part of the disagreeable duties that at times fall to one's lot to perform.

CHAPTER XI

STUDENTS' NOTES

To insist that students shall take proper notes upon lessons given to them, and to see that these notes are satisfactory, both in quality and amount, adds a considerable burden to the many responsibilities which fall upon the teacher; hence, it is important to be really assured that the effort is worth its cost. The justification lies in remembering the psychological considerations which lie at the basis of all good teaching. Three of these considerations are particularly applicable—

**Psychological
Necessities
for Note-taking**

1. *The teacher must make sure that the pupils make responsive reactions to new impressions if those impressions are to become fixed in the mind.*—The taking of notes is a responsive reaction, and, considering the limitations of time and other necessary economies, if adequate new ground is to be covered, note-taking is probably as economical and effective a reaction as can be universally applied.

2. *Old ideas and preconceived views resist change, so that new ideas are instinctively liable to distortion in order to accommodate them to their predecessors.*—A correctly taken note fixes concretely the new idea, and every reconsideration of the note reinforces in correct terms the new facts.

3. *New mental impressions require to be thought over in order that they shall be woven into systematic relationships.*—Retained impressions must not be chaotic or they are valueless and probably injurious, since chaos is the mother of error. A note enables that orderly and recoverable system of impressions that is necessary for the longer mental process of interweaving into orderly and securely fixed knowledge.

These considerations form a sufficient *raison d'être* for the note-book and the effort requisite to maintain it efficiently.

**Who should
Formulate
the Notes?**

Who should formulate, that is, actually express in words, the facts incorporated in the notes? At first blush, the reply is "The student himself."

But such an answer assumes the very crux of the question. Obviously, every student approaches a subject of study in a mental attitude entirely distinct from every other student.

Each mind is, in a thousand ways, distinct from every other mind, and, hence, the facts which need to be recorded in each case, and the form of record, should, on these considerations, be specific to the individual requirements. Such personal applicability of notes can only be effected by the individual himself, and the effort of formulating the note is one of the highest and most effective reactions that any student can perform. The case, therefore, seems unanswerably strong. But it assumes—

1. That the student will exercise the energy necessary to secure the requisite notes.

2. That he has the capacity to recognise and select the requisite facts to be incorporated in an adequate note.

3. That he can do this with the necessary promptitude, so as not to lose thereby other facts equally important, but which he may easily fail to secure whilst engaged upon the task of recording any particular fact.

4. That whilst, figuratively speaking, keeping one eye on the notes he is taking, and the other on the teacher, he is also absorbing correct impressions of facts which may in themselves be quite intricate, and, therefore, call for the fullest effort of comprehension without the distracting operation of simultaneously endeavouring to concentrate upon and record them.

5. That he has the requisite literary capacity for succinct expression.

6. That the mechanical effort of writing is spontaneous and calls for no physical or mental effort.

Without analysing the case to exhaustion, these considerations are sufficiently vital and sufficiently serious to cast more than a grave doubt upon the student's personal capacity to take effective and adequate notes. To emphasise the query thus made, it may be added that every student's requirements as to what he needs to note is not such an entirely distinct proposition as might at first sight appear. The common and fundamental facts of knowledge in any subject are fixed truths, and the most that can result from proper notes given by the teacher is a possible noting of facts now and then, which particular students may not need, because they are already part and parcel of their stock of knowledge. This is, obviously, a minor consideration when viewed beside the all-important ones already referred to. Notes given by the teacher

obviously lack that psychologically desirable demand upon the student for strong and vigorous reaction; but here, again, it must be remembered that impressions gently borne in on the mind and adequately repeated, will be just as clearly defined and just as completely recoverable, as those more violently or energetically acquired. On balance, and bearing in mind the average age and type of person comprising the continuation student, it would seem obvious that notes dictated by the teacher are both necessary and best.

Not every teacher who, consciously or unconsciously, recognises the necessity for dictating in exact terms the notes his students

**Rules
for the Teacher
in giving Notes**

should take, also recognises the conditions with which he must comply if the notes are to be of maximum utility with minimum waste. The following rules are, therefore, offered in a form

convenient for reference—

1. There should always be the ruling endeavour to make the instruction a maximum and the note-taking a minimum. Both, of course, must be effective for their respective purposes.

2. Students should be required to give their undivided attention to the work of following the lesson and grasping it. Hence, the taking of notes should comprise a definite interlude in the instruction.

3. The interludes for note-taking should, as a rule, coincide with the end of a natural division of the lesson subject. Where the points of natural division are few or wide apart, whilst the amount of matter is great or intricate, it may be necessary to interrupt the teaching for the purpose of taking a note. Such interruption may furnish a necessary relief to the strain upon both teacher and pupils.

4. The words of the notes should be formulated by the teacher in the compactest form possible. This should be a spontaneous effort on the part of the teacher, as a rule, with occasionally the introduction of the specific words comprised in his own teaching notes, as in the case of illustrative figures, formulae, and other details which it is unnecessary or undesirable to formulate on the spur of the moment. The advantage of the spontaneous note is that it is a reformulation of ideas already enunciated in longer terms in the lesson itself, and thus of necessity takes a second verbal form. This helps very much to correct any

false impressions which individual students have formed, and it helps the memory by reviving impressions which have already been received.

5. Students should be keyed up to the most rapid writing they can do, in order not to take up too much time; but care should be taken not to discourage them by dictating too hurriedly, and compelling some of them to leave gaps in their writing. For gaps mean disconnected ideas, and probably invite error in the subsequent effort to complete the notes from memory.

There are two general ways in which class notes can be taken—direct into the permanent note-book, and temporarily into a rough

**Method of
Taking Down
the Notes**

book. Under the former method there is economy of time and effort, but the dictation must be much slower or the writing and form will be crude and the arrangement less effective; in the latter case, those objections are avoided and the only adverse consideration is whether the extra copying is justified. Considering the aid to memory resulting from re-copying, contrasted with the probability that notes taken direct into their permanent form will be far less likely to be re-read or considered further, the second method would appear to be justified. Under these circumstances, the writing instrument would be pencil, and form and appearance would remain for the later re-copying. Nevertheless, the teacher should indicate the necessary headings, and either guide the form, when form is important, or else actually set it down on the blackboard for incorporation in the rough note.

The form of notes is never unimportant and usually has a direct influence upon their memorial value and upon their clear and full understanding afterwards. Time spent upon the

Final Notes

details of neat writing, orderly arrangement, ruling-up, display, and other effective aids to appearance is, therefore, time well spent. To the science and technical student, arrangement, clear and correct diagrams, and the like, are absolutely necessary; whilst the commercial student, in addition, should always be encouraged to good penmanship, since it is a distinct asset amongst his qualifications. The final notes should be periodically handed in to the teacher for examination and, as will always be found necessary in practice, for actual correction.

This question, like so many others already discussed, appears to admit of a prompt affirmative reply. But superficial answers are inapplicable to the consideration of questions affecting teaching methods. In the present case, despite the halting semi-acquiescence of some authorities, the answer is "No." For what are notes for if, *inter alia*, they are not to summarise the whole lesson? What is worth remembering and is really essential should go into the notes, otherwise they are palpably defective. Elaboration, extension of illustration, additional information from text-books—matters often suggested as advisable or necessary—should only be effected by the student when directed and guided thereto by the teacher. It is not detail that is wanted in notes, but compactness and crystallisation. A few pregnant sentences may illuminate and hold where detail would only confuse and lead to forgetfulness. Then, too, notes are not miniature text-books nor argosies with full holds and deck cargoes: they are, rather, nothing more than the flood-gates, which, opened, let in the swift-running tide to which they have been the portal. The proper sphere of the text-book is dealt with elsewhere, as is also the mutual relationships of notes and home exercises.

Teachers generally, and commercial teachers in particular, need to be warned against a vicious practice which all students studying shorthand are liable to follow—the

A Caution practice of utilising the lesson for purposes of reporting, or speed practice. The evil takes two forms—the attempt to take a verbatim note of the teacher's remarks, and the writing of the dictated note in shorthand by students whose knowledge of shorthand is entirely inadequate. Neither abuse should be allowed. A verbatim note of the teacher's remarks will never be transcribed, and if it were, it would be nothing but waste time so far as the subject under instruction was concerned. This is not the place to discuss the mental operations of taking down verbatim notes, but it will suffice to say that, whatever the character of the instantaneous comprehension necessary to enable a verbatim note to be made, it is not of the order that gives comprehension, much less remembrance, of subject matter of which the hearers are necessarily present as learners and not as critics who already have a competent knowledge. The case of

the student with inadequate shorthand knowledge who tries to "take down in shorthand" the dictated notes is still worse. It is scarcely credible what nonsense he will put into his transcript, thereby undoing the whole of the teacher's work and filling his own mind with contradictions, errors, and chaos. The following extract from a student's note is an extreme example which it would be difficult to parallel. It has been selected for illustration, however, as its very grossness emphasises the point of this paragraph—

STUDENT'S NOTE ENQUIRES

1. *Purposes served thereby—*

- (a) Information desired by the enquirer is obtained this may be entirely for his convenience; reciprocal *i.e.* likely to be of advantage to both; by a benevolent or convenience to a third part with or without reciprocal advantage to enquirer and enquiree; strategic *i.e.* to still a on the enquiree or get valuable information from him etc. this last is open to pass beyond the bounds of common honesty.
- (b) Necessary materials are obtained for opening or continuing business transgressions as price lists, quotations, specifications, etc.
- (c) Indirectly they may give the enquiree valuable suggestions or information *e.g.* they may indicate a general one, for some new recall. The feelings of competitors, The methods of the competitors, etc.

CORRECTED NOTE ENQUIRES

1. *Purposes served thereby—*

- (a) Information desired by the enquirer is obtained. This may be entirely for his own convenience or it may be reciprocal (*i.e.*, likely to be of advantage to both). Or it may be a benefit or convenience to a third party with or without reciprocal advantage to the enquirer or enquiree. Or again, it may be strategic (*i.e.*, to steal a march on the enquiree or get valuable information from him, etc.). This last is open to pass beyond the bounds of common honesty.
- (b) Necessary materials are obtained for opening or continuing business transactions; as price lists, quotations, specifications, etc.
- (c) Indirectly they may give the enquiree valuable suggestions or information (*e.g.*, they may indicate a general want for some new article, the failings of an existing one, the failings of competitors, the methods of competitors, etc.).

The work of re-writing notes, whilst in itself strictly compensating the student for the trouble he has taken, is of such importance that it should have specific recognition by the teacher. Hence, in any system of recorded marks for exercise work, there should be a specific allotment of marks for satisfactorily re-copied notes. If the subject is one in which the re-copying is merely a matter of

**Assessment of
re-written Notes**

straightforward writing, the mark valuation may be small. Where it involves details of drawing, illustrating, and other matters of penmanship and effort, the valuation should be higher, even, if necessary, amounting to half the total marks assigned for all written work.

There remains to consider some points with respect to the permanent note-book and the method of making entries. The size of the book is not important within certain limits, but it should certainly not be too small. It is somewhat popularly regarded as a commendable plan to have the note-book of a size convenient for carrying in the jacket pocket. This idea is false. It may be satisfactory to have a book of this type for formulae, tables, and matters which are intended to be *committed to memory for literal reproduction*. Such information is often most laborious to acquire and has to be diligently and unremittingly repeated many times before it has become absorbed. But the very necessity for this justifies separate copying apart from the permanent note-book, being matter which should be isolated, and concentrated upon in season and out of season until it is mastered. The normal notes, therefore, should be on paper of a quarto (10 in. by 8 in.) size as a minimum, to half-sheet foolscap (13 in. by 8 in.) size as a maximum. Loose sheets, unless bound in a holder as filled, are objectionable, so that, as a general rule, an actual exercise book is best. The paper should, in general, be written upon only on the right-hand side page, but diagrams and other drawings may well be placed on left-hand pages opposite the appropriate textual matter. It is highly important that the following points should be systematically observed, since there is, otherwise, a great likelihood of crowded or badly-arranged notes, corresponding to ill-digested conceptions.

1. There should be a ruled left margin of about one inch.
2. In general, the paper should have ruled lines.
3. Every subject should have its appropriate heading adequately defined and written in a central position and underlined.
4. Every paragraph should have its subject head similarly clearly defined, written in at the commencement of the paragraph, and likewise underlined.
5. Paragraphs should be numbered, and sub-sections should have sub-section numbering. The numbering suggested is Roman

capitals for main heads, figures for first sub-sections, and small letters for secondary ones.

The length of the scheduled class lesson places an important limitation on the nature and extent of the notes which can be appropriately given, whilst the nature of the subject may be such that it is only possible to get the necessary facts and illustrative material by collating them from various sources outside of the normal text-book. In each of these cases, it may be necessary that the teacher should provide more matter than can be taken down by the students at the lesson, and possibly, also, such matter may be necessary for reference to base the actual discussion upon. If the requisite clerical work can be done in the institution—and within limits, an institution aiming at really effective work should provide for it—the teacher's task will be much assisted by sufficient duplicated copies being taken so as to allow of one being handed to each student on the class night, and the actual discussion itself may then be compactly summarised in the normal dictated note. An example of an efficient arrangement of this kind is shown by the accompanying illustration, the typed pages being the teacher's preliminary facts, and the written matter a portion of the actual notes as taken by the student.

**Supplementing
Students' Notes**

Example of Profit Sharing Scheme

Messrs. Briggs & Co.

Messrs Briggs & Co. at their Whitewood Colliery introduced a Profit Sharing Scheme because they had had four strikes in five years resulting in the aggregate seventy-eight weeks "A bonus scheme was started and during seven years," says Mr Briggs, "the bonus paid to the workmen was really earned by extra care and economy, but in the two years of great inflation which followed the bonus paid to the workmen was more than was earned by the extra efficiency and labour, and thus, from a business point of view, the shareholders were not so well off as they would have been without a system of profit sharing.

The scheme included provision for a 10% interest to be reserved to the shareholders which was subsequently increased to 15%. Although not stipulated for in the original agreement the workmen obtained an increase of 80% in their wages as a result. The shareholders continued to grumble after getting their increased percentage, and the men for their part were not satisfied, as they found the additional increase in their incomes not a sufficient compensation for their sacrifice of their unions: which had been a condition in the contract. The scheme lasted from 1865 to 1874.

Mr. W. H. LEVER'S (LEVER BROS.) SCHEME.

The Scheme was inaugurated in February 1907, the outlines of which are as follows:-

1. Mr. Lever himself is the only Ordinary Shareholder in the firm: 5% interest on the value of his shares was to be reserved to him. The Dividends on the Preference Shares in the Company would, of course, be paid first.
2. "Partnership" Certificates conveying holdings in the capital of the firm would be issued to all employees - men and women who were not less than 25 years of age and had had not less than 5 years' service in the firm. Initially some 1,130 people would be eligible and they would receive Partnership Certificates of the value of £500,000, the maximum to be allotted to each grade of workers to be:-

£5,000	where the annual salary was	£750 and upwards.
£2,000	" " " " "	" £500 to £750.
£1,200	" " " " "	" £300 to £500.
£800	" " " " "	" £200 to £300.
£400	" " " " "	" £100 to £200.
£200	" " " " "	" less than £100.

3. Other conditions attaching to the employees' holdings would be:-

- (a). They would carry dividend equally with the Ordinary Shares held by Mr. Lever after the reservations above had been made.
- (b). An employee leaving the service voluntarily forfeited his holding as he did also by misconduct.
- (c). No servant of the Company could demand to be a partner in the business.
- (d). Every applicant for Partnership Certificates under the scheme had to make a declaration that "he would not waste time, labour, materials, or money in the dispatch of his duties, but he would loyally and faithfully further the interests of the concern to the best of his skill and ability."
- (e). No payment would be required for the Certificates, but at the same time they would not be negotiable and no money could be borrowed on them.

(In outlining the scheme to his employees Mr. Lever said:- "Statistics showed that profit-sharing schemes of the ordinary type had only an average life of five years, and, in my opinion, the failure which has overtaken so many profit-sharing schemes in the past was due to their having ignored the element of loss-sharing, without which they could not obtain a sound business.

SIR CHRISTOPHER FURNESS'S SCHEME.

The ship-yards of Messrs. Furness, Withy and Co., Ltd., were not paying. As an alternative to closing down, Sir Christopher Furness, in November 1908, proposed a co-partnership scheme which, however, only lasted for one year, being then rejected by the employees.

Two proposals were offered:-

- (a) That the firm would sell its yards entire to the men's Trade Unions who could run them as capitalists owning property. the price to be fixed by actuarial valuation with certain assistance which the members of the firm would give to the new owners.
- (b) Limited co-partnerships would be offered to the men. "Employees Shares" were to be bought by the men who were to agree to a deduction of 5% from their wages until the amount of the shares was covered. Any profits in the meantime which fell due were to go towards paying off the balance owing upon the shares. 4% per annum fixed interest would be paid upon the shares whether the firm made any profit or not. Men leaving the Company's service would be allowed to sell their shares to any of their fellow workmen who would buy them at valuation. In addition to the fixed interest the "Employees Shares" would carry an equal right to participation in the profits of the Company after 5% interest had been reserved for the Ordinary Shareholders, and proper allowance made for depreciation, reserve and development funds.

Failure of the Scheme. - When at the end of the year's trial which was given to the second of the two schemes, the question of continuing the arrangement was discussed, 492 voted for continuance and 598 against; a great number of the men abstained from voting. An account of the causes of failure says:-

"The main cause of the opposition is that such irregularity of work has arisen as to furnish anything but a full year's employment for most of the men, and that the lowest paid workers when they have been idle have felt the need of the few shillings they may have accumulated towards the shares. It is also stated that the co-partners are unable to obtain employment in other local yards, owing to the attitude of the men at these places. Moreover, the opinion seems to have gained ground that the scheme would act to the disadvantage of the Trades Union at a time of crisis."

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PROFIT SHARING STATISTICS
During each of the Three Years ending June 1912,
June 1913 and June 1914.

	1912.	1913.	1914.
1. No. of Firms, etc. with Schemes.....	136	143	152
2.a.No. of Schemes abandoned during the year.....		3	5
b.No. of Schemes abandoned from dissatisfaction of employees.....		2	1
c.No. of Schemes abandoned from dissatisfaction of employers.....		-	2
d.No. of Schemes abandoned from lack of success in business.....		-	1
3. Average No. of persons in permanent employment....		106,097 (139 Firms)	131,871 (151 Firms)
4. Greatest No. of casual employees on any day.....		5,435 (")	5,052 (")
*5.a.Total amount of bonus distributed..		£302,488 (93 Firms)	£357,421 (104 Firms)
b.Of which Gas Companies distributed.		£123,205	£139,111
*6.a.No. of participating employees.....		56,677 (")	63,572 (")
b.No. of non-permanent employees.....		516	526
c.Of which belonged to Gas Companies.....		492	526
*7.a.Ratio of bonus received to wages....		6.2% (")	6.3% (")
b.Average amount per head.....		£5. 7. 0.	£5. 12. 0.
c.No. of Firms paying no bonus.....		11	10

*The figures shown refer to the year ending at the preceding 31 December.

*Participating.

NOTE: More than half of the new schemes promoted during each year made their bonus in the form of a cash payment, and cash payments appear to be the prevailing method. This is probably due to:-

- a. It is simple.
- b. It appeals direct to the employees.
- c. It becomes impossible for some firms to absorb further capital so that they have no alternative but to pay cash. On the other hand, Gas Companies characteristically adopt some method of capitalising the bonus.

Profit Sharing and Co-partnerships

I. Definitions

Profit sharing is a name commonly given to that arrangement whereby the workmen over and above a certain standard rate of wages get a bonus as a periodical addition, as a recognition of their having been more economically efficient during the period for which the bonus is payable. Hence, profit sharing is merely another name for a bonus system.

Co-partnership is the name given to some form of profit sharing which is considered to carry with it a certain admission into what would look like the controlling element of the business. This again is not a correct name - co-partnership has not in practice resulted in the workers having any voice at all in the management of the concern.

II. The causes of failure:

Profit sharing has been very much advanced as a solution of some of the most pressing problems which are concerned with labour unrest. There has been a great deal of economic writing in favour of this co-operation between labour and capital, and any one would have expected that many schemes would have resulted. The facts, however, are quite the reverse, for as compared with the number of firms there are very few schemes in existence. In general, their failure appears to be due to:-

- (11) Schemes usually contain a clause to the effect that the workers may not belong to a Trade Union, and the employers find that as a result they lose more than they gain
- (12) Although labour may be efficient a fault in the administration may bring the profit down to less than the minimum amount which, as a rule, has to be paid to capital before the workers participate
- (13) The average bonus is so small that it does not greatly appeal to employees
- (14) There is a certain amount of favour or philanthropy about profit sharing which takes away the spirit of independence which wage bargaining has developed

III. Difficulties attached to Co-partnership

- (1) If the bonus is applied in shares and placed to the capital of the company it means that the capital is constantly increasing
- (2) If the shares are bought in the open market the capital will not be increased, but if the scheme is successful the demand will cause a rise in the price of the shares. In any case the shares will tend to a premium
- (3) It is not every business which is carried on by shares, and it is not easy to introduce further capital.

CHAPTER XII

STUDENTS' TEXT-BOOKS

PROBABLY few people, competent to express an opinion, would hesitate to urge that a suitable text-book is a most desirable

Educational Desirability

aid to students' study, however good the actual teaching, or however "practical" the subject.

It may be well, nevertheless, to state some of the educational grounds for requiring students to provide themselves with the text-book prescribed by the teacher responsible for any particular subject. They include—

1. The encouragement of enquiry and research by the students.
2. The presentation of the subject from a second point of view.
3. Diagrams, facts, and other illustrative matter become the students' possession for reference, and save much valuable class time.
4. The teaching can concentrate upon essential and fundamental principles, ensuring grasp of these, and freeing the student to follow details with the prospect of clear understanding, and with added interest.

5. In some subjects the text-book forms a necessary basis for exercise matter which could not be easily provided otherwise. Similarly, models and worked examples are frequently only adequately feasible in this way.

6. At times, helpful preparation can be made by the student studying the text-book and then coming to the class for a critical or analytical examination of the subject matter.

There are definite and, in some respects, serious limitations to the value of a text-book; they, of course, to some extent vary with the character of the subject treated. The teacher should recognise

Limitations of a Text-book

these limitations.

Text-books are usually written with a double purpose—to serve as a manual of the subject for the student who has not the opportunity to obtain the aid of a teacher, and to be used by the class student in

(a) Double Purpose

conjunction with the teaching. In serving the former purpose, the text is liable to be out of all proportion to the class requirements,

giving much detail that is quite unnecessary, and contracting much that is needed to be expanded. In serving the second purpose, it may either tie the teacher down too much or present things in a way entirely out of harmony with the methods of instruction which the teacher follows. So substantial is this fact that not infrequently an original and progressive teacher is quite unable to adopt a particular text-book, or to find a suitable one that he would be willing to adopt.

The text-book too frequently suffers from the author's personal bias and limitations. Thus, a general text-book will naturally

(b) **Affected by Author's Bias** be limited by the particular character and scope of the author's training and knowledge. A theoretical treatment may be inadequate, and the

author may not have had a sufficient practical training to balance the two aspects of the subject. This is often seen in the character of the illustrations given and the exercises set. Again, the subject matter may be foundational for several purposes, as in the case of Practical Mathematics. The author may be a trained and experienced engineer, so that his text is heavily biassed in this direction, and out of touch with matters which building, chemistry, mining, and other technical students may require. Occasionally, as in languages, the book may advocate a "system," and, in that case, is written up to the views characteristic of, or claimed by, such system.

A text-book is written to attract as wide a range of users as possible. In consequence, it either tends to cover only matter of

(c) **Is as General as Possible** average requirement or else it spreads too much and fails to give the concentration that is required.

In the former case, it is too shallow; and, in the latter, much of the subject matter is useless.

None better than the teacher realises how rapidly knowledge and method tend to become antiquated. Fresh discoveries, new

(d) **Tends to become Antiquated** ideas, changes in practice, new methods of research, and many other factors, justify a celebrated scientist's opinion that every text-book

on a scientific subject should be scrapped if over ten years of age. And, with some reservations, the idea is generally applicable, and is not merely characteristic of scientific knowledge. Even *Caesar* takes an attractively new garb in modern texts, and

old presentations, by comparison, are repulsive. Not least amongst the factors that tend to make text-books become old-fashioned is the constant tendency to specialise knowledge, and, hence, to write up to a particular type of requirement, thereby shutting off all the general texts which were previously in use, however excellent in themselves such books may be.

The requisites of a good text-book may, to some extent, be a matter of opinion; nevertheless, there are certain matters upon which common agreement may be expected. These include the following—

**Requisites of a
Good Text-book**

Continuation students are not studying a subject to exhaustion. They require a certain amount of detail, and beyond that point further matter is useless. Especially is this the case when the subject of study is part of a grouped course and is ancillary.

**(a) Reasonable
in Compass**

This requisite, therefore, becomes tantamount to saying that students' text-books should be specialised. There is, in fact, little or no demand for those works of prime discovery and progress that mark new eras in the development of knowledge. The *Origin of Species* would never be dreamt of as suitable for purposes of study, although the attention of students might, under certain conditions, be directed to it with a view to getting them to read it. So a new work on a subject of chemical analysis or research, or a new contribution to economic thought, or a specialised work on a legal technicality or a new law. Such works are always too voluminous, apart from other equally grave objections. In short, continuation students are not to be taken as devotees or specialists, but what they really are—students who require a certain amount of precise technical or other knowledge for a particular purpose. If they should ultimately specialise from pure love of a subject, so much the better for themselves, and so much more the gratification that they shall have been stimulated thereto by the technical studies which they took during their continuation course.

**(c) Not too
Abstruse
or Difficult**

Continuation students have definitely limited vocabularies, powers of study, time, and powers of sustaining interest. Hence, whilst they do not exactly require pabulum in the early stages, and whilst they can rise to the real study of solid works in their later years.

nevertheless, the language of the text-book cannot be too carefully considered. That it may be educative, however, it should not be written down just to the level of, say, the average type for whom it is intended, but it should be of a sufficiently literary and technical style to present an instrument of educational value, as well as of precise knowledge.

Expense is a very material matter to almost all continuation students, and the cost of text-books, especially under a course curriculum, becomes a considerable total, even when the prices of the selected books of study are considered with the utmost care. Fees and travelling expenses are not to be forgotten, nor are the further items of stationery, materials, and instruments.

(d) Of Popular Price

(e) Attractive in Appearance

Novel readers, at lending and other libraries, usually select a book, if they have no recommendation or other inducement, such as knowledge of the author from a previous work, by turning over the pages and drawing a conclusion from the nature of the arrangement and any other evidences which appeal to them. In such a survey, the amount of narrative, of conversation, the headings of chapters, and the like, more or less assist towards a decision. The case is not much different with students. There are features of arrangement, of type, of illustration, and other matters which, superficial indications as they may be, are, nevertheless, substantial considerations, when, as they actually do at times, they cause the student to put the book definitely aside, or, what is the same thing, carry it to and fro as a matter of duty, but never, if they can avoid it, to refer to its contents. Good print, fairly good paper, illustrations where applicable, good margins, avoidance of crowding, and like considerations, all serve to make good impressions conducive to attracting the student to read.

No one better than an experienced teacher knows the real requirements of students, or can better gauge their limitations. So necessary is this consideration that it may almost be said to be indispensable. A less profound range of knowledge or a less range of practical experience may be accepted as less disadvantageous qualifications in an author of a students' text-book than profound knowledge or wide practical experience. This is,

(f) Preferably written by Competent and Experienced Teachers

of course, analogous to the circumstance that a full-time technical teacher admittedly ceases to have real practical experience of his special trade subjects, however much he may wisely endeavour to maintain touch with practical matters. *Qua* teacher, such a man can maintain his position as the most efficient person obtainable, despite the sacrifices he must make and despite any advance which practice may make. *Qua* author, the experienced teacher can well maintain his superiority.

An otherwise admirable book may be marred by lack of detailed consideration of the means of ready reference. Subject and paragraph headings should abound; distinguishing type for important and minor matter, brief summaries, and, above all, a really simple and complete index, should all receive the maximum care and attention. Whether a breach of tradition or not, the index should be absolutely straightforward, with sufficient secondary references to ensure that minor aspects of a subject reference which may take special importance in particular connections, shall be indexed. Thus, "Prosperity, Commercial" would be absurd, but not "Preference, Canadian" and "Canadian Preference."

(g) **Maximum
Facility of
Reference**

Sometimes there is little choice as regards the particular text-book which a teacher shall adopt; some particular work may stand out so prominently that it is more or less without a competitor. Generally, however, the choice of book presents many difficulties. Some of these sufficiently follow from what has already been said as not to require further mention. Other considerations must, however, be also borne in mind. For example, shall such a text be chosen that it will practically suffice the student throughout the whole of his course, even when running over a number of years? As a general statement: No! For elementary stages, an elementary text is desirable; and for advanced stages, a more substantial and solid work, or a number of works, should be employed. Still speaking in general terms, the "all-round" book is a fallacy. It tends to give too little for any particular stage, and it ties down the teaching for too long a period, thereby robbing it of the opportunity to introduce new and improved treatises. Then, too, a sovereign spent on books over a period is better than fifteen shillings initially and entirely. Young and inexperienced teachers should be particularly

**Choosing
a Text-book**

careful not to be guided by publishers' puffs and so-called "reviews." A much better guidance is to be had from an effort to ascertain what books are in use in other institutions, and, still better, by seeking the advice of an experienced teacher. A special warning is necessary against books claiming to be specially written for particular examinations. The examinations for which continuation students enter should all be of an educational character, and it is only special cases like Civil Service examinations where any deviation should be required. And in these special cases, it is probable that the professional coaches and institutions are the wisest recourse for the student. Whilst students acquire "vested interests," as it were, after having invested in a text-book, this circumstance, beyond calling for proper consideration before effecting a change, should not bind a successor to adhere to the text-book in use under a predecessor for longer than the particular session in which he takes over the reins, if this occurs after the session has commenced. And this brings us to the inference that the commencement of a new session is the natural time for reviewing the situation with the object, if necessary, of effecting a change. It should be the business of a teacher to keep up to date by making a point of seeing as many new books as possible, as well as knowing most of those in current use.

It would be unwise for a young teacher to attempt to go through a course of work without some class-book or other. Nevertheless, there are occasions when a decision to have no book is the only sound action. Such cases are when a new subject arises and no special works exist; and, similarly, when only substantial texts are available, and the class is an elementary one; as, also, when the subject is one specially applied to local or other limited purposes. Occasionally, also, an entirely practical subject may be efficiently conducted without a text-book, but if a suitable one can be found, it is in every way better to adopt it. There are other cases in which an experienced teacher may deliberately discard all published texts: in that event, however, he is probably on the high road to being competent to contribute an original and improved work himself.

**Can a Text-book
be Dispensed
With?**

Merely requiring students to purchase a book is not to achieve the object of getting them to study it. Reference has already been

made to evasion. A further form of evasion arises when the teacher takes no definite steps to ensure that the text-book is actually studied, but allows himself to be deceived by its employment as a homework or class question book. In such cases, students are pretty sure to use the book merely for obtaining the terms of the specific questions set, and if the subject is one in which answers are usually given to the exercises, then only for the further purpose of answer reference. Of course, regular and methodical study of the text-book is the ideal, but, in practice, less may have to be acquiesced in. It, therefore, becomes necessary to consider various expedients for ensuring that some, and the most important parts in particular, shall have proper attention. It is for the teacher himself to consider any particular case, but the following general methods are suggested.

1. To compile a special question or questions from time to time, so framed that it will be absolutely necessary to study the text before the answer can be attempted. In this case, the parts of the text necessarily to be studied should be indicated by the teacher, and, of course, they are precisely those for which the question has been devised.

2. A portion of text may be required to be prepared for the next class lesson, and some form of oral or brief written test may be then made before that lesson is commenced.

3. A portion of text may be set for reading, and a brief note upon it required to be handed in as homework.

4. A definite number of marks may be assigned to text-book notes, and such notes taken in from time to time and assessed.

5. A test paper may be set, say, after twelve lessons, to be answered at home with the aid of the text-book, the answers to be handed in within a fortnight or other period which will give the necessary time for text-book study or revision.

Despite the difficulty in getting some students to do home study, even from the set book, it is always possible to get other students who will readily go further and extend the scope of their reading, if the necessary books are available. In higher classes, in particular, excellent work can thus be obtained. It may be that the teacher will, in special cases, be willing to loan some of his personal books, but it is more satisfactory to avail of other means if they are to

Compelling Text-book Study

Extra Text-book Study

hand. Thus, it may in some cases be possible for a school reference library to be formed and books therefrom loaned to students as part of the general organisation of the institution. Then, if there is a local Reference Library, it will generally be possible to secure the co-operation of the librarian and his committee to purchase a number of works recommended by the teacher, should they not already be catalogued. Where a pretentious library exists, it is certain that the librarian will be only too glad to publish typed or other lists of the books specially suitable for such reference, whilst, in less important cases, the teacher may himself give a list to the class, and even arrange the students who are to have particular books at particular times. Yet, again, there are usually students who are able to afford the cost of more than one text, and, hence, in intimating the necessary text-books at the beginning of the session, the titles of other recommended books for additional reading can be given. The teacher should then make a point of ascertaining what students subsequently obtain any of the additional books, and with this knowledge he will be able from time to time to recommend portions for special study. A further excellent opportunity also occurs when prizes are awarded. Students will often voluntarily request the teacher's guidance, and whether they do so or not, useful works for the next session's study can be suggested as prize selections. Of course, if the prizes are given without the students' choice, the opportunity arises of making sure that books of this type shall actually be given.

It is a very debatable question whether or not text-books should have answers when the subject admits. The matter is settled

**Should
Text-books
have Answers ?**

beyond dispute when in any particular case the book is only published with answers, but quite a considerable number of books are published with answers optional, whilst in still other cases answers or keys are obtainable only by actual teachers. In arithmetic and in mathematical subjects, where the answer comprises merely the final numerical or equivalent result, abuse of the answers can scarcely be very extensive, since there is no help given to the method of solution. If, therefore, students refer to the answers, whether before or after working examples, they must still perform the various steps in any operation, and detection of dishonest manipulation is easy if the work is really examined by the teacher. Set off

against any disadvantage which reference to answers may cause is the substantial result that any happy-go-lucky working is impossible, and that if the first answer obtained is wrong, the pupil can do nothing else but try again—to his obvious advantage. A mixture of text-book questions with others selected elsewhere by the teacher will suffice to indicate the real knowledge and ability of the students. Answers in other forms, such as worked examination tests are taboo: examination requirements and real educational work are frequently such different propositions that they are incompatible.

No hard and fast rule can be given as to whether or not the text-book should be used for class teaching purposes. Where a subject admits of or requires class exercise work, the text-book may be a satisfactory means of furnishing the material therefor. But a sharp line should be drawn between teaching and practising. For teaching purposes, in the ordinary course of things, the teacher's instruction and demonstrations should be entirely independent of the book, reference to which at any time should only be exceptional, and for such special purpose as referring to a diagram or illustration, or to statistical matter.

**Should
the Text-book
be Used
in actual Class
Teaching?**

CHAPTER XIII

HOMEWORK

CONTINUATION teaching is of necessity carried on under very serious disabilities. Not least amongst these is the circumstance that, in the normal course of things, students and teacher in any particular subject meet only once per week, whilst the period of instruction is confined to a session of something like twenty-five to thirty weeks. The palpable limitations which such conditions impose result in an urgent necessity for the regular imposition of homework tasks, and their not less regular performance. Even under favourable conditions (*i.e.*, where the work is regularly set and regularly performed), the normal time required for proficiency in an average subject runs to some three or four years. There can be no question that a long period like this militates heavily against progress, and the percentage of continuation students who pass in and out of the schools without attaining proficiency in the subject of study which they undertake, is distressingly great.¹ Anything which reduces the total period of study requisite for proficiency in any given subject is to be welcomed as a factor both of educational progress and educational economy. Such a factor is homework, when satisfactorily secured.

**To secure
Satisfactory
Homework
involves
Important
Considerations**

In order that homework may be of full educational value, and an instrument for securing the progress of students, it is requisite that certain important conditions should be fulfilled. These considerations affect both teacher and student, and both require to perform their respective obligations with more than ordinary energy.

¹ It may be taken as established that, whether commercial students or otherwise, any given number of new students will approximately run as follows—

From 50% to 60% will fall out during the first year or will not return the next year.

From 20% to 30% will fall out during the second year or will not return the next year.

From 20% to 30% will survive indefinitely, some even to six and seven years.

As is so generally the case, when an educational result is to be achieved, the primary responsibility for success depends upon the teacher. This is the case with respect to
(a) Teacher's Responsibilities homework. The teacher must have the liveliest sense of its importance and of his responsibility in securing its efficiency. And since, in the nature of things, compulsion is not an instrument which can be utilised to any great extent—and the less resort that has to be made to it the better—it follows that other effective means must be found to secure it. As regards the teacher, he must contribute his efforts in a peculiarly resolute and effective degree. These include—

1. *Tact and determination.*—Continuation students are of an age when they cannot be driven, and when any sacrifices they make of leisure or pleasure are sacrifices of maximum substantiality. Their new freedom, their youthful zest for enjoyment, the demands of daily work, and many other considerations, act as counter influences requiring more than ordinary effort to resist. Hence, the teacher cannot approach this difficult problem and expect to achieve success unless he brings much tact and determination to bear upon it—the one effecting a due lubrication of the machinery, and the other contributing the driving power.

2. *Systematisation.*—The more difficult any problem is, the more necessary it is that the efforts directed towards its solution should be systematically applied. The homework system cannot be too carefully planned and considered in all its bearings.

3. *Unsparring personal effort.*—The teacher must do more than his share. Mere correction of the work handed in, for example, without stimulating and helpful observations, will not secure maximum work from the students.

“The ass can be taken to the water, but he cannot be made to drink,” and if he does not, in the case of homework, metaphorically drink, it is useless. The following
(b) Students' Requisites considerations are important to this end—

1. *Conviction.*—It is obvious that, in matters which involve personal sacrifices, there must be either *force majeure* or moral conviction before the individual will submit to the sacrifices. Passivity cannot effect conviction, and, hence, the value and importance of the work must be emphasised and re-stated as

frequently as circumstances require. The student's goodwill in the matter is an "Open sesame" to success.

2. *Encouragement*.—It is not sufficient that the student should be morally convinced of the value and necessity of homework: he must have the direct stimulus of encouragement and reward. Mere abstract considerations of importance, and mere appeals to self-interest, are little more than pious platitudes: it is the positive that counts, and, hence, every factor of encouragement and every suitable form of reward should be applied.

3. *Consideration*.—It is due to the student that the work set shall be imposed with every consideration. Hence, its quantity, nature, and suitability must be carefully considered, and the student should be satisfied that every care and consideration in these respects is actually taken. Where grouped courses are in operation, it is well that the students should understand that all the teachers are alive to and mindful of the fact that homework is set in all subjects of the course, and that the cumulative demand this makes upon students is never lost sight of.

Like a skilled craftsman, the teacher should know exactly the temper of the tools and materials he uses. Homework is one of

**Objects and
Scope
of Homework**

his most effective instruments, and the importance of gauging its functions and services is correspondingly great. Some leading principles may be deduced from a recapitulation of the limitations to class lessons. In the first place, it is in the nature of things that class instruction cannot be exhaustive of even the minimum which it is desirable that students should know. Again, the classroom cannot always allow of the requisite amount of practical work for those subjects in which it is necessary, whilst, if it could, it might not be advisable, in view of the possibility of making better use of the time. Then, again, class teaching is collective, and this makes it difficult to ensure that each student exercises the requisite effort to understand and learn what is taught—the slacker has only too much opportunity of taking cover. And, yet again, effective as forceful, skilful instruction is, it is not a corollary thereto that the knowledge which most sticks in the minds of students is that which the teaching furnishes. "Self-help" is not only a great instrument in building character; it is also a sure instrument of enduring learning—in fact, it is *the* instrument

which is universally responsible for the bulk of knowledge which any individual possesses. Now the classroom is not a suitable atmosphere for the healthy development of "self-help," since the main object of class teaching is to develop interest, intelligence, and the understanding of fundamental principles. The objects of homework can now be stated. They are—

1. To fill out to the requisite degree, the ground-work instruction given in class.

2. To revise the instruction given in class,

(a) **Objects** and so fix it in the memory.

3. To give the necessary mental exercise, both in order to fix the instruction and to give it application by use.

4. To give, as far as possible, practical work for which there is not sufficient class time.

5. To round up that type of slacker who is sufficiently amenable as to apply himself when he finds that, otherwise, his slackness will be exposed.

6. To cultivate "self-help"—the hand-maiden to success in learning.

7. To correct the inherent defect of class teaching, which necessarily tends to be broad, general, and discursive, whilst real knowledge must be definite, orderly, and clear—requisites which the deliberate consideration involved in home study tends to secure.

To define the scope of homework is to specify its limitations. In the first place, it cannot always be obtained—evasion will occur;

for valid reasons or otherwise, individuals will

(b) **Scope** render it spasmodically; home conditions may not be conducive, and in some cases are prohibitive;

certain subjects, such as drawing and typewriting, may not admit of the necessary materials being available at home; etc. In the second place, the greater the amount of time given to attendance at class, the less is available for homework. Thirdly, there may be no home source of assistance. From these limitations it may be deduced—

1. That it must mainly be of a supplementary rather than of a preparatory character. Whether supplementary or preparatory, however, it must be such as to admit of proper performance by *all*.

2. That it must be confined to subjects or exercises which the student can understand or perform without assistance.

3. That it must be strictly limited and, when the students take a group course, proportioned to the total demanded in all the subjects taken. Since, as stated in the chapter on "The Harmonious Whole," the grouped evening course should, in general, require, and not exceed, three attendances per week, the homework cannot exceed an equivalent amount of time, and, obviously, might well require less.

4. That it must be regularly imposed. It is necessary that it shall follow a fixed routine, so that students can quickly fall into a habit, and be able to regard their home time-table as fixed. The danger of spasmodic effort is bound to materialise if in one subject the homework is regular and in another occasional.

It has already been mentioned that the homework scheme should be systematised. This can be effected in various ways,

A Systematic Scheme

but the ideal one seems to be some such scheme as the following, which has been in most successful operation in a number of institutions for many years. The class teachers hand in to the administrative department of the institution, the manuscripts of their proposed homework at least a week before the date when it is to be intimated to the students. That department, in the meantime, prepares the necessary number of duplicated copies to allow of one copy for each class student, lecturers' copies, and file copies for permanent record. The lecturers' and students' copies are placed in the register case appertaining to each class, or are handed over to the lecturer personally not later than the day on which they are required, and are by him distributed during the class meeting; the file copies are kept by the administrative department, and are available for reference at any time. Should the questions set involve any intricate drawings, the lecturer himself performs them, handing his original over for the necessary number of copies to be duplicated, or, alternatively, taking these off for himself.

The advantages of such a scheme are so great that they are only limited by the capacity of the students to respond. Obviously, as regards the teacher, he will frame his questions with the utmost care, and exercise strict foresight with respect to them, thus securing their maximum efficiency. As regards the teaching time, it is economised to a substantial degree, since there need be no time spent in taking down questions and relative instructions. And as

regards the students, they have every incentive to respond with the actual worked exercises, they get no absurd renderings of the questions, as inevitably happens when they take them down from dictation or copy them from the blackboard; they have them in an attractive form, encouraging care and deliberation; they can file them along with the corrected answers, the whole presenting cumulative evidence of their industry and progress; and they can be under no misapprehension as to the sincerity and care extended by their teachers to make the homework efficient and helpful.

**Examples of
Various Types
of Homework
Questions**

The advantage and educative scope of an organised scheme of homework may be to some extent gauged from the following examples, taken from questions in various subjects exactly as set.

1. "Capital" is a very common word and serves to express several distinct ideas. Look up its meanings as given in a dictionary, and classify them into the following

(a) **Educative** groups, illustrating each meaning by both phrases and sentences—

- | | |
|------------------------------|---------------------|
| (a) Derivatively. | (d) In economics. |
| (b) Colloquially. | (e) In accountancy. |
| (c) In art and architecture. | |

(NOTE.—Think carefully over this question and follow up in the dictionary any word which you do not understand either in the question or in the meaning given in the dictionary.)

2. The following has just appeared in the newspapers—

Want of Capital.

Under the winding-up order made against the Sierra Morena Copper Mines (Limited), of Finsbury-square, E.C., accounts have been issued showing unsecured liabilities £12,331, and available assets "book debt £3 18s. 8d." the deficiency as regards contributories is returned at £92,909.

The company was formed in April, 1900, with a nominal capital of £80,000, to acquire from the Columbia and North-west Mines Development Syndicate (Limited) for £60,000, payable in shares, a mining property situated at Penafior, Seville, Spain. The nominal capital was increased in May, 1907, to £110,000, and, in addition to 19,993 shares subscribed for by the Columbia Syndicate, 567 shares have been issued for cash, the total issued and paid-up capital being £80,560. The failure of the company is attributed by the late secretary to want of working capital.

You are—

- (a) To write out a clear statement of the facts which, as given in the newspaper, are unintelligible to an ordinary person.

- (b) To state the meanings of—
- the deficiency as regards contributories."
 - " nominal capital of £80,000."
 - " for £60,000 payable in shares."
 - " the nominal capital was increased in May, 1907, to £110,000."
 - " the total issued and paid-up capital being £80,560."
 - " working capital."
- (c) To state—
- How much capital was advertised for in May, 1907.
 - What items comprised the total issued and paid-up capital.
 - How many shares the Columbia Syndicate held.

(b) Practical

1. EXTRACTS FROM MANUFACTURER'S PRICE LIST

Brace Bits. 92. George's Pattern.

$\frac{1}{4}$ in.	$\frac{5}{16}$ in.	$\frac{3}{8}$ in.	$\frac{7}{16}$ in.	$\frac{1}{2}$ in.	$\frac{9}{16}$ in.	$\frac{5}{8}$ in.	$\frac{11}{16}$ in.	$\frac{3}{4}$ in.	$\frac{13}{16}$ in.	$\frac{7}{8}$ in.	$\frac{15}{16}$ in.	inch
11d.	11d.	11d.	11d.	11d.	1/1	1/1	1/2	1/2	1/4	1/5	1/6	each

Improved Screw-pitch Gauges.

1525	No.	4.	Price	5/-;	24	pitches,	4, 4 $\frac{1}{2}$, 5, 5 $\frac{1}{2}$, 6, 7, 8, 9, 10, 11, 12-16
1526	"	7.	"	5/-;	26	"	4, 4 $\frac{1}{2}$, 5-16, 18-20, 22, 24-26, 28, 3
1527	"	40.	"	4/-;	22	"	9, 10, 11, 12-16, 18, 20, 22, 24, 26-
1528	"	157.	"	4/-;	22	"	32 and by two's to 74

Stocks and Dies with Tape and Plug Taps without Cases, No. 1905. M.S.

	A.	B.	C.	D.E.	F.	G.H.I.	J.
Stock Sizes			6.8.10		16.18.20		42.5.8.52 m.m.
Price per set	18/6	20/-	21/6		32/6		195/-
Extra Dies	2/3	2/3	2/6		3/6		14/- per pr.
Tap Wrenches	2/6	3/-	3/6		5/6		22/6 each

(Note.—Columns D, E, G, H, and I have been omitted in order to save space.)

With respect to the above, you are to prepare documents in accordance with the following requirements—

(a) Select three sizes of Brace Bits and order a dozen of each; also 6 ea. of each of the gauges shown; also 1 set ea. of C, F, and J, Stocks and Dies with extra Dies and Tap Wrenches, as shown.

(b) Make out an invoice for the goods you order. (Orders of £2 10s. take 2 $\frac{1}{2}$ % discount and of £5, 5%); packing and carriage free on orders of £2.

(c) Set B Stocks (sizes 5, 6, 7) are discovered to have been sent and charged for instead of Set C. Advise their return (carriage forward) and ask for immediate despatch of a Set C and for a Credit Note.

(d) Write advising despatch of Set C, as above; apologise for error: show the Credit Note and invoice requisite.

(e) Make out the usual monthly statement.

(f) Make out form of cheque (the form you deem best) and remit under covering letter.

2. A representative of The Best Coal Co., Ltd., met Mr. Joseph Jones at the Exchange and agreed to deliver 1,200 tons of Coal under a yearly contract: 100 tons to be delivered monthly between the 10th and 15th day of each month. Deliveries were to be made at Redditch unless advised by the 1st of any month that they were alternatively to be made at Walsall. The coal was to be Wigan "King" Coal; the contract price to be 18s. 10d., delivered in buyer's wagons. Payment of each consignment to be made within fourteen days of delivery; and the usual conditions of contract with respect to strikes, breakdowns, and delays resulting therefrom to apply

(a) A form of contract is given below: you are to copy it and incorporate the above particulars.

(b) Having done this, you are to assume that no form of contract is used, but that the same particulars are incorporated in a letter dictated to you. You are to write such a letter.

THE BEST COAL CO., LTD.

Telegrams | "Bescole, Wigan."
Telephone | 9999 Wigan.

WIGAN _____ 19..

Quantity

Description

Price

Place of Delivery

Terms of Payment

We confirm having sold you to-day as under—

Deliveries under this Contract may be wholly or partially suspended during strikes and breakdowns of plant, and we shall not incur any liabilities in respect thereof nor for delay in delivery by train or ship arising therefrom. At the date of expiry of this Contract, any balance undelivered on account of any of the above causes shall be cancelled.

Thanking you for your favour,

We are,
Yours faithfully,
For THE BEST COAL CO., LTD.

(NOTE.—The following Questions refer to Macgregor's *Evolution of Industry*.)

1. (a) The word "they" on l. 1, p. 10, is ambiguous, and clearer words should be used. Supply the words.
(c) **Compelling** Text-book Study (b) The words "and Government stand out" (lines 6 and 7) are very obscure. Expand the phrase to express the meaning intended.

2. Explain the following—

(a) p. 13 says: "Social agitation for the betterment of conditions of life does not get less insistent after a great deal has been granted to it."

(b) p. 15: "The land does not grow." After explaining, state what *may* grow, and thus result in an equivalent effect.

(c) p. 15, last line: "Only under the pressure of extreme scarcity could it be brought into use." Then state what would be the result of such land being brought into use.

(d) p. 17, last line: "The evolution of industry is the history of this force."

(e) p. 20: "If there are many products like radium, our resources will not be limited because our space is limited."

(f) p. 22: "The complexity of industrial organisation has to be reduced to its lowest terms to give us the real meaning of its building up."

(g) p. 25, l. 1 of second paragraph: "... the idea of work as an object in itself."

(h) p. 29, last lines: "England could not sell textiles cheaply if she sold only at home." Then state the same idea in broad general terms.

All exercises are not to be of the lengthy or involved type of the preceding, and, speaking of the normal

(d) Simple type, particularly for lower stages of work, a simpler and more direct form of question may predominate. Thus—

Arithmetic.

1. Construct a table of conversion factors to enable cost price to be converted to selling price in order to secure profits on *selling price* of 50%, 40%, 33½%, 30%, 25%, 20%, 16½%, 15%, 12½%, 10%, 7½%, 5%. Take as examples, cost prices of 6d., 1s., 2s. 6d., 3s. 9d., 5s., 6s. 8d.

2. Find the freight on 30 c/s ea. 2' 7" × 2' 6" × 2' 5" @ 56s. 6d. plus 10%.

Work by logs. Nos. 5 and 6 (text-book, p. 137), Compound Interest.

Business Methods. (Various stages.)

1. Copy the given sheet of tabulated matter. Rule carefully, and copy neatly and accurately.

2. Describe clearly how letters should be made up for the post.

3. Illustrate four ways in which cheques may be crossed, and explain the effects of each crossing.

4. In accordance with the plan suggested in the last lecture for avoiding the troublesomeness of the irregular arrangement of names in the Index pages of the Letter Book, copy and arrange from the given sheet the names which you would transfer in readiness for the opening of a new Letter Book. Rule up neatly the spaces for entering the folio numbers.

5. Copy the given map showing Mediterranean Trade Routes.

6. What are the chief requirements which the following documents must satisfy: Memorandum of Association, Articles of Association, Prospectus, Annual Summary, Return of Allotments.

7. Discuss (a) the correct procedure in the election of a chairman under various circumstances; (b) the preparation of an Agenda.

Economics.

1. Define "goods." What is meant by "free" and by "economic" goods respectively? Illustrate how a free good may become an economic good, and *vice versa*.

2. Discuss the social valuation of (a) any simple commodity; (b) any composite commodity (*i.e.*, one which represents a "bundle" of utilities rather than a single utility).

3. What is the law of increasing return and what the law of decreasing return? Illustrate diagrammatically.

4. Write in narrative form an analysis of the Conciliation Act, 1896.
5. (a) What have been the fundamental ideas which have governed recent child legislation ?
(b) Name as many recent Acts as you can which are classifiable under the head of Child Legislation.
(c) What is a child ?
6. Give a brief description of the process of land enclosure as it has taken place in England.
7. Money has three primary functions, viz., as a medium of exchange, as a common measure of values, and as a standard for deferred payments. A fourth function is that of serving as a store of value. Discuss each of these points briefly.

(NOTE.—In the Reference Library there are three standard works of moderate size on "Money," viz., Jevons, *Money and the Mechanism of Exchange*; Walker, *Money*; and Nicholson, *Money and Monetary Problems*. You should read *one* of these, preferably the last-named.)

- (e) **Combinations in Special Cases** In special cases, a combination such as practical work and homework may be set out in the form of a time-table. Thus—

TYPEWRITING

CLASS II

Course of Work and Study from January

Week Com-mencing.	Practical Work.	Study.
19.. Jan. 8	Exs. 110, 12, and 13. Type some of 111 if possible	Study p. 92 and the rules on p. 95 in Ex. 108
.. 15	Exs. 114, 15, and 17, and, if possible, some of 116	pp. 139 and 140 <i>re</i> ruling up tabulated matter. Study rules on p. 99, Ex. 14; and capitalisation, pp. 100-1
.. 22	Exs. 118, 19, and 20	Learn contractions in Ex. 144, pp. 129 and 130
.. 29	Exs. 121 (once), 22, and 23	Revise last week's contractions and study carefully pp. 110-11 down to the end of the "dash"
Feb. 5	Exs. 124, 25, and 26, and, if possible, complete 120	Learn contractions, Ex. 155
.. 12	Exs. 127, 29, and 30, and, if possible, 128	Revise last week's contractions, and study from "the full stop" (pp. 111-112, and 113)

Week Com-mencing.	Practical Work.	Study.
Jan. 19	Exs. 131, 32, and 33, and, if possible, complete 128	Learn contractions (p. 161)
„ 26	Exs. 134, 35, and 36. Type answers to Qns. 1-5 (p. 124)	Revise last week's contractions, and study Forms of Address (pp. 115-118)
Mar. 5	Exs. 137, 38, and 40, and, if possible, 139	Quotations (p. 143 and 146) and Filing (p. 147)
„ 12	Exs. 141, 42, 43, and complete 139	“Typists' Clerical Work” (149 and 151), “Typing from Dictation” (pp. 151-200), and “Study of the Typewriter” (pp. 29-31 to beginning of par. 4)
„ 19	Exs. 147, 48, and 49	pp. 31-34 to end of 1st par. on 34; also “Duplicating” (pp. 153-5 to end of “Errors in Stencilling”)
Apr. 2 or Mar. 26	To be fixed later	pp. 34-37, and 34-5, and “Classified List of Terms” on p. 36, not to be studied too closely; pp. 155-6, “Hand-copying Apparatus,” with pp. 156-58
Apr. 8	Lancashire and Cheshire	Examination

Class Work. Exs. 150, 52, 54, 57, 59, 62, 64, 65, 66, 67, 68, 69, 70, and 72, together with some practical work in duplicating.

COMMERCIAL ENGLISH

CLASS III

N.B.—(1) Written Work: Arrange your work clearly and methodically.

(2) Study: Mark your text-book for revision purposes, and consult the lecturer in reference to points of difficulty or obscurity.

Text-book Home Study.	Home Exercises from Text-book (to be returned for correction).
10th November— p. 37 to end of Ch. Sections 75-84	p. 164 Qn. 4 (1), (3), (5).
17th November— pp. 43-49 Sections 85-93	p. 42 Qns. 9 and 10

Text-book Home Study.	Home Exercises from Text-book (to be returned for correction).
24th November— pp. 49–52 Sections 94–101	p. 200 Qn. 1 Sentences (1), (6), (10) Qn. 2 Sentences (1), (3), (5)
1st December— pp. 52–56 Sections 102–107	p. 68 Qns. 5 and 13
8th December— pp. 57–62 Sections 108–115	p. 283 Qn. 5
15th December— pp. 62–67 Sections 116–118	p. 69 Qns. 15 and 17

Unfortunately, in many cases an organised scheme of homework such as that outlined is past praying for, and teachers are then driven to less efficient methods. The general principles of all homework arrangements are similar (*e.g.*, such matters as teachers' requisites, students' requisites, and scope). The further points discussed in the remaining sections of this chapter, are also of common applicability. The dangers and limitations, however, of unorganised methods of giving homework need to be indicated, so that they may receive due attention. They include—

1. Limitation of the scope of questions. Extended questions are impossible, and, hence, brevity in wording should be a leading consideration. This will result in—

(a) Economy of class time.

(b) Accuracy in taking down.

(c) Exact taking down—long questions would tempt to contraction, with consequent danger of omissions and errors.

2. The teacher is tempted to a greater use of text-book questions. Many of these questions are very bad, being too often set in a form admitting of straightforward answering from the text, with the result that students can hardly resist the temptation to copy the book literally, or to condense it without the necessary real consideration. Even in such subjects as arithmetic, shorthand, and book-keeping, there is much scope, and much advantage, to be gained by the teacher setting original questions or other forms of work.

3. Questions should be written in full on the blackboard. Even the simplest questions should not be dictated, as mis-hearings, mis-spellings, misunderstandings, and omissions will inevitably occur. Hence, every question should be written out by the teacher in full, and in clear writing, and the students should have time to copy with the requisite care and detail.

4. Students should have a separate note-book for the entry of homework questions. Paper scraps, scribbling books, or any other temporary forms of taking down should be disallowed or discouraged for they have the disadvantages of—

(a) Being in greater danger of becoming lost or mislaid.

(b) Being destroyed after use. Questions are liable to be required again, and unless incorporated with the answers—a waste of time in re-copying—are most unlikely to be recoverable.

(c) Not being brought to class subsequently where they may be specially valuable.

(d) Being carelessly or roughly taken down.

There are two general methods of homework correction—separate marking by the teacher and collective correction in class. Both have their appropriate places, but, in general, the correction is by the teacher, who receives the worked exercises at a given class meeting and returns them corrected at the next.

Homework Correction

(a) Separate Correction

Separate correction by the teacher involves a great expenditure of time, and should be compensated by adequate recognition from all concerned, and by the fullest benefit of the corrections actually accruing to the students. But what is the teacher to correct, how is he to do it, and to what degree are his corrections to be carried? What is to be corrected depends upon the subject, and upon the teacher's conception of his duty or responsibility in the matter. The following represents the types of errors which arise in descriptive and other written answers—

1. *Material errors.*—These involve errors in matters of fact relating to the subject. They may comprise—

(a) Sheer blunders, as in the case of absolute misunderstanding.

(b) Errors of operation or performance, as in arithmetical operations, drawing of diagrams, mis-typing.

(c) Logical errors, including errors of judgment, of conclusion, of incorrect inference, of irrelevancy, and of digression.

(d) Errors of omission. In these cases, what is stated may be correct, but it is not all that should be stated (*i.e.*, the answer is incomplete) with or without a consequent vitiation of the work done.

2. *Breaches of form*.—These include all kinds of technical matters such as amateurish presentation when there is a proper or specialised form, as in setting out a business document; bad narration in book-keeping; waste of space in representing a graph from unity when it need only show a circumscribed range; and arranging an arithmetical answer in a crude, illogical way instead of in a clear and businesslike one.

3. *Literary Errors*.—With commercial students, errors of a literary character call for careful and unremitting correction. Particularly is this the case when the subject of English is not included in the instruction. These errors comprise—

(a) Errors of grammatical construction.

(b) Errors of expression arising from weak vocabulary, inadequate power of expression, and ambiguous words and phrases.

(c) Bad, weak, and misleading punctuation.

(d) Mis-spellings.

4. *Penmanship*.—Commercial students need constantly to be reminded and impressed with the substantial value and importance of skill in penmanship. They should be made to realise that accuracy, despatch, and practical convenience are materially assisted by good penmanship.

These types of error require their own forms of correction and their own means of elimination by due emphasis of the correction.

(ii) **How to
Correct**

Material errors, when gross, involve a more or less worthlessness of the answer, and in such case may only admit of absolute ruling out. Such occasions, however, are rare. Normally, errors of this type admit of verbal correction, a pencil or pen-and-ink entry being made, and the error struck out. In the nature of things, such corrections must be brief and incisive. They should be made with sufficient clearness and in sufficient juxtaposition for the student to read them easily and in their proper context. Breaches of form may also admit of written correction, but, if they are at all common,

they should be corrected by a general statement to the class as a whole, with or without the presentation of a correct form to serve as a future model. When a model is called for, it should usually be followed up by a further question of the same type to be worked as soon afterwards as possible.

In correcting typewritten work, it is desirable to supply students with a key sheet of signs and explanations, and, when referred to once or twice in class, the signs soon become known, and result in a great economy of the teacher's time. Such a sheet is shown on page 144.

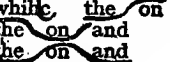
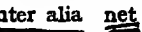
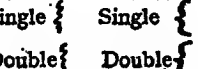
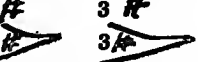
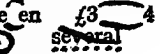
This is only applicable to particular cases, and if resorted to in any large measure becomes an abuse; it is inapplicable to any subject as a regular procedure. The general method of operation with day school pupils is to change exercises so that each pupil marks another's work. This does not necessarily imply mistrust of the students' honesty, but it, obviously, lends colour to the suspicion. When applied in the day school it is generally for the purpose of stimulating the faculty of criticism, and thus presenting lessons in a new light. With continuation students, however, it is impracticable to change exercises, and, hence, students will correct their own, although a good purpose will be served by freedom and encouragement, in these cases, to compare one another's work. Calculations, maps, drawings and diagrams, shorthand outlines and transcripts, and copied exercises can be thus corrected and compared. Concurrently with the correction of the work, the teacher may make observations, explanations, and criticisms, and subsequently the exercises will require to be collected and examined by the teacher in the usual course, for assessment.

All homework should be duly assessed and the assessment recorded in a marks book or sheet. In making assessments, the teacher should definitely fix in his mind what are the points which he will or should take into consideration. Thus, material accuracy, correctness of form, literary quality, and execution are all points of importance, but not equally so, nor always applicable. The main point in written answers must always be their material or technical accuracy, and the marks are, naturally, regarded as primarily furnishing an indication of the quality of the student's knowledge

(iii) **Special Form
for Typewriting**

(b) **Collective
Correction**

**Homework
Assessment**

SIGN.	EXPLANATION.
thus it and so thus if it is 	The line or lines so marked should have commenced at the position indicated—farther inwards if the sign cuts the typing, farther outwards if the sign is to the left.
and at the same so that we can hence thus 	The lines should have been typed only as far as the sign if it cuts the typing, and continued up to the sign if it is to the right of the typing.
therefore  therefore 	The enclosed matter should have been typed in at the position indicated by the pointer.
while the on the on and the on and 	The letters or words so marked should be transposed. Thus: <i>which, on the, and on the</i>. In the last case it should be noticed that only the first and third words are transposed.
there the dutable 	These all indicate mis-spellings. In the first case there is a letter too many, in the second an incorrect one with the right one shown, and in the third case a letter has been omitted. Where serious errors have been made, the words are written out below and ringed for special attention. Thus— <i>dutiable</i> 
on therefore in this manner 	The line ends are badly dressed, and more attention must be given to them.
	Insufficient head space has been allowed.
inter alia <u>net</u> 	Words with a single line drawn below should have been <i>underscored</i>, and those doubly underlined should have been typed in ALL CAPITALS.
By by in the the way 	The errors of typing so marked are obvious.
Single { Single { Double { Double { 	Matter so marked should have been typed with the line spacing named and not as done by the student.
2# 3# 	Two or three-line spaces should have been left according to the figure given.
be en several 	No space, or less space, should have been allowed. Requires a full stop. Stet—the matter is right.
Axe 	Bad form altogether. A large cross right across the work indicates that it is so wretchedly done, that it is a waste of time to try to mark it.

or skill, as the case may be. Penmanship and execution may, in some subjects, and especially with older students, have no value attaching to them beyond that general, unmeasured influence which neatness and care will always unconsciously exert on the mind.

A figure assessment, based on a maximum of ten, is the commonest form, but it is by no means the only one, and with students of the continuation type it is probably not the best. A better one appears to be a symbolic one, such as "alpha," "beta," "gamma," etc., whilst one which works admirably in practice is "a plus," "a," "a minus," "b," "b minus," with an exceptional use of "c" for very bad cases. At the end of the course, a valuation may be placed upon the symbolic mark, such as 6, 5, 4, 3, etc., thus resolving the symbols into a comprehensive final valuation. It may seem somewhat elaborate for little appreciable benefit to have symbolic marking, but, in practice, it abundantly justifies itself in the encouragement it gives without depressing those who are unable to obtain the highest symbols. The symbolic mark allows of broader gradings of each mark of assessment, as it were, and brings out groups of approximately equal students in a better degree, whilst it seems to carry a more altruistic aspect than does the method of figure assessments. A very stimulating addition to the actual marking is given when all the students simultaneously keep a marks record of the whole class, each student, in that case, being known by a key number only. In this way, every student can gauge his relative progress, and also measure the collective ability of the class. For clerical students, the entering of marks forms a useful practical exercise, but where the practice would take up too much time, or be unnecessary on account of the type of student, a similar result is achieved by the teacher entering and posting the record up for general inspection.

The question arises in practice whether or not the teacher should accept late work. Occasionally, an advantage may accrue to the individual student by this concession, but this

Late Work does not generally arise, and, on the whole, it is better to give the student the additional encouragement by accepting such work than discourage him after he has gone to the trouble of executing it. Frequently, it gives more than proportionate additional trouble to the teacher to mark, but

a little good nature goes a long way to undo the temporary annoyance that may arise when the inconvenience is substantial.

It is for the teacher, after he has gone to the trouble of correcting homework, to ensure that the corrections have a maximum effect.

**Making
Corrections
Effective**

To secure this he should make short memoranda as he marks, of the chief faults and errors, and then, before commencing the next class lesson, he can spend a few moments in pointing out the commonest or more important errors, scrupulously avoiding any adverse personal references, and refraining, as from poison, from making any sarcastic or cutting observations that would, if indulged in, assuredly alienate the sympathy and mutual respect of teacher and pupils. The blackboard should be used to give visual impressions and fix the correction in the students' minds, but at the same time care must be taken not to convert correction into a repetition lesson. It is important to remember, too, that the incorrect facts should not be written on the blackboard, since that is only visualising and confirming errors; the concentration, both by the spoken and written word, should be on the correct facts.

The ability to spell correctly and readily is an important qualification for commercial students, and, hence, all exercise correction should be vigilantly directed to the correction of mis-spelling. The error itself should be clearly corrected and, in addition, the word should be boldly written on the exercise, or else the mis-spelt words collected and written on the blackboard for the students to note.

Spelling

**Collection
and Distribution
of Exercises**

It is important to make the collection and distribution of worked exercises as quickly as possible, so as to reduce to a minimum the waste of time that the process involves. Some observations on this will be found in the chapter on "Class Organisation and Administration."

CHAPTER XIV

SYLLABUSES, REPORTS, AND RECORDS

THAT one may get at a glance an indication of the contents of a book, it is customary to preface it with a "Contents." Each section or chapter of the book is written upon a definite "text," and the title given to such section may or may not convey a general impression of the portion of text which is built around it. The better the chapter title, the more it conveys to the reader an indication of the subject matter, and the more definitely he can decide whether or not the subject has an interest for him. When the title is such that it conveys nothing, it is merely an ornamental heading, although its application may be found to be appropriate enough after one has read the text. And just as a chapter head is, or may subsequently prove to be, a comprehensive definition of the subject matter, so a syllabus is, or becomes when the subject matter has been investigated, an epitome or general guide to the subject matter of a course of instruction. Obviously, that is the best stated syllabus which gives the most significant summary.

Whilst all syllabuses are nothing more than subject heads, it is possible to give a kind of classification of syllabuses according to the particular purposes in view in compiling them.

Kinds and Functions of Syllabuses

Thus, there is the syllabus intended for the information of a reader who has no knowledge of the contents of a given subject. Again, there is the syllabus which informs the initiated of the selection of subjects which is intended to form the course of instruction, and the relative extent and importance which is attached to the various sections. In both cases, the "scope" of the proposed treatment is intended to be indicated. Lastly, there is the syllabus which is intended to show the views held by the teacher and the character of the treatment he proposes to adopt for the purposes of instruction. It follows that the draughtsman of a syllabus must first make up his mind as to the kind of syllabus he is going to compile. The three kinds here differentiated may be named the "generalised," the "extended," and the "working" syllabus respectively.

This is the syllabus which is particularly suitable for the uninitiated. Its value lies less in its detail than in its general comprehensiveness in giving such a summary of the proposed course as will at once interest and attract the reader without giving mystic or incomprehensible technicalities. It is the kind of syllabus best suited for a prospectus of classes, being both economical and adequate.

**(a) The
Generalised
Syllabus**

This is the syllabus which is required for the information of inspectors and officials, and for permanent class records. It is by

**(b) The
Extended
Syllabus**

this syllabus that the teacher more or less stands or falls in the official and inspectorial mind. Whilst a syllabus, and the actual teaching of which it is the foreword, may radically differ, nevertheless, a really efficient syllabus *does* to some substantial extent serve as a gauge or index of the character of the teaching that is to be expected. Of course, it is possible for the teacher to have done nothing more than make a copy of some other syllabus, but this usually betrays itself, particularly to one who knows something of the subject and the traditional methods which have come to mark its syllabuses. The teacher is wise to make this syllabus really his own, whatever suggestions he may have drawn from external sources and incorporated.

This may, or may not, be necessary. It comprises more detail than the preceding types, indicates the order of development

**(c) The
Working
Syllabus**

which the teacher is going to follow in his lessons, and shows the relative proportion and importance which the various sections have from the teacher's personal point of view. This syllabus will normally be placed in the teacher's private lesson notes and will guide him, as the course proceeds, as to how far he must extend or contract the scope of his work in order to have it completed at the expiration of the session. Being a working syllabus, it will also be noted with verbal additions and alterations, as the experience of the session indicates is desirable. When a syllabus becomes too extended, it passes from the function of a syllabus and virtually becomes a "notes of lessons."

Examples are shown on the following five pages—

THEORY AND PRACTICE OF COMMERCE. STAGE I

(GENERALISED)

Production, exchange, commerce.

(EXTENDED)

Economic welfare and some of its characteristics. Production furnishes man with materials and goods; commerce collects and distributes them; certain services minister to the physical and mental welfare of man. Various classifications as of occupations, the requisites of production, commerce, and trade.

Retail Trade.—Outline of history; general machinery of trade purchases and payments; profits.

Historical development of the retail trade; practical consideration of the trade machinery of purchase, with a simple treatment of the relation of the law of contract thereto; methods of payment, with a simple consideration of the banking services in relation thereto; analysis of profits.

Wholesale Trade.—Its economic services, general organisation, and routine.

As much practical work as possible will be done throughout the course.

(WORKING)

I. *Introductory. Economic Theory*.—

1. Scope and purpose of the subject.
2. Some economic aspects of industrial society, with comparative classification of individual and national expenditure.
3. The economic structure of modern society is based upon "exchange." What exchange comprises—various classifications. Commerce one main branch of production.
4. What is production?
5. Business capital—its forms and functions.
6. "Services" cover aspects of welfare not directly economic.

II. *The Retail Trade*.—

1. A natural economic development. Anglo-Saxon and Norman times.
2. The Middle Ages; markets and guilds.
3. Modern retailing.
4. Machinery of retail trade:
 - (a) Purchase of trade supplies—sources and methods. The price list, orders, and relative correspondence.

(b) Taking delivery; documents and routine concerned.

(c) Simple outline of essentials of contract.

(d) Payments—instruments and agencies.

(e) Banking procedure as regards the customer; cheques—drawing, paying into bank, etc.

(f) Profits—gross; net; turnover; working expenses.

III. *The Wholesale Trade*.—

1. Functions of dealer and warehouseman.

2. The wholesale warehouse and its organisation.

3. Methods and machinery of purchase and sale.

(a) Raw materials and food-stuffs.

(b) Manufactured goods.

(c) Documents and procedure—estimates, tenders, orders, invoicing, consigning, etc., with relative correspondence.

BOOK-KEEPING. GRADE I

(GENERALISED)

The general principles of double-entry book-keeping applied to the keeping of simple business accounts, including the preparation of a simple Profit and Loss Account and Balance Sheet.

(EXTENDED)

General principles of double-entry book-keeping; opening and keeping of Journal, Bought and Sold Books, Returns Books, Cash and Petty Cash Books, Ledger—sold, bought, nominal. Balancing of accounts; testing postings by trial balance; preparation of Profit and Loss Account and of Balance Sheet.

(WORKING)

I. *Introductory Principles—*

The Petty Cash Book, used to illustrate the first essentials of good book-keeping—method, neatness, and accuracy.

(a) Simple form, with subsequent analysis.

(b) Analysed form showing advantage of "method."

II. *Purchase and Sale of Goods on Credit—*

1. The principle that subsidiary books conveniently collect and arrange information—each according to its particular character—illustrated by Purchases, Sales, and Returns Books (simple and analysed).
2. The principle that necessity and convenience require the collecting of total periodical records into a single book, illustrated by posting the totals of these subsidiary books to corresponding Ledger Accounts.
3. The principle that totals of Ledger Accounts may be likewise transferred for assembly, illustrated by transferring the previous Ledger Accounts to Trading Account.
4. The principle that the Ledger must show exactly how individuals stand with respect to the purchases made of them, and the sales to them, to be illustrated by posting each item in the preceding subsidiary books to respective personal accounts in the Ledger.
5. Investigation of results to show the accuracy of the work and the principle of double entry.

BOOK-KEEPING. GRADE I (continued)

(GENERALISED)

(EXTENDED)

(WORKING)

III. Recording Financial Transactions—

1. The principle that all money transactions must be as fully accounted for as those with respect to goods illustrated by the Journal and Cash Book.
2. Method and business practice illustrated by the analysed Cash Book.
3. The principle that the Ledger must contain the record of all monetary transactions with individuals, illustrated by posting from Journal and Cash Book to Ledger.
6. Investigation respecting the monetary transactions bringing out that, if the Cash Book is regarded as a volume of the Ledger, there has again been a double entry. Further investigations into the accuracy of the work.

IV. Ascertaining the Final Results of the Trading—

1. The principle that incidental expenses and gains must be fully recorded in order to see whether the business is making a profit, to be illustrated by suitable introductions into the accounts and then posting them to appropriate Ledger Accounts, confirming again the principle of double entry.

2. Is the work correct? Balancing and Trial Balance.

3. Has a Profit been made? Profit and Loss Account.

V. How does the Business stand?—

Balance Sheet.

VI. Further Exercises—

Further necessary exercises for proficiency and revision.

FRENCH. GRADE I

(GENERALISED)

An elementary and general course of instruction comprising the study and practice of fundamental sounds, simple conversation, reading, and dictation, with the necessary grammar.

(EXTENDED)

Reading and Conversation.—Practice of fundamental sounds; simple reading exercises and conversation thereon; simple colloquial references to persons and things, including some conventionalities of business intercourse.

Dictation and Composition.—Dictation of simple phrases used in the conversation lessons, and of extracts from the reading exercises; simple composition similarly based.

Grammar.—Elementary grammar of the parts of speech, including the chief tenses of *avoir*, *être*, and the regular verbs. Parts and particular tenses of common irregular verbs required in the conversation exercises.

(WORKING)

Conversation, Reading, and Dictation.—The progressive study of Charlin's "Anglo-French Course" (Part II), with frequent simple variation from the text, in order to cultivate the ear and to retain necessary alertness. Reading and dictation from the text—the latter after home study, involving the copying of set portions of text for the necessary spelling, or, alternatively, translation from the English text with subsequent comparison with the French text. Study of "Elementary French Reader."

Composition.—To be based upon re-translation from the English text, together with such additional exercises as may be necessary from time to time.

Grammar.—The progressive study of "_____," with written and memorial homework therefrom.

COMMERCIAL LAW.

GRADE 1

(GENERALISED)

The Law of Contract, the Sale of Goods, Agency, and the Law of Master and Servant, reference being made to important sections of Statutes and Acts as necessary.

(EXTENDED)

Contract.—Elements. Written contracts. Contracts under seal, and contracts of record. Consideration, flaw, legality, breach. Special forms of contracts.

Sale of Goods.—Sale of Goods Act, 1893. Rights and duties of parties.

Agency.—General principles. Types of agents. Factors Act, 1889.

Master and Servant.—Outline of relationships studied with special reference to the Workmen's Compensation Act.

(WORKING)

Contract.—Elements of a valid contract. Agreements which the law requires to be (a) written; (b) under seal. Contracts of record. Rules relating to the doctrine of consideration. Statute of Frauds (s. 4). Flaws in contract. Legality of object. Agreements in restraint of trade. Elementary knowledge of the view the law takes of wagers. Gaming Acts, 1845 and 1892. Distinction between "differences" and *bona-fide* purchase of stock. Assignment and discharge. Breach.

The Sale of Goods.—The contract. Rights of buyer. Delivery. Conditions and warranties. Breach of contract. Rights of vendor. Transfer of the property. Sales by auction. Sale of Goods Act, 1893.

Agency.—General principles. Rights and liabilities of principal and agent. Ratification. Termination of agency. Broker. Factor. Commission Agent. Auctioneer. Banker. *Del credere* Agent. Factors Act, 1889.

Master and Servant.—Law of master and servant considered, with special reference to the Workmen's Compensation Act.

In seeking to compile a syllabus, the teacher should take under review the various presentations of the subject which are available.

**Compiling
a Syllabus**

Thus, there is the normal text-book which sets forth the broad general aspects of a subject with the author's estimate of their relative importance—indicated by the manner and scope of his treatment. An examination of more than one text-book will add to the value of this source of suggestiveness, and also, by comparison, set off the two authorities against each other, and thus show a mean between their respective views. Another source of reference is the examination syllabus of an examining body—again, presumably, compiled by an expert. These syllabuses are of much less value than they are usually credited with. If a particular examination syllabus is of such vital importance that there would be folly in not adopting it, such as the syllabus of a Civil Service examination, for which candidates can do no other than simply cram, then adopted it must be, good or bad. With this exception, no examination syllabus should be exactly adopted by a teacher, even if his students enter as candidates for the examination to which the syllabus applies. The teacher's function is to teach—to educate as far as possible, and to give the students of his best without any ulterior considerations. Working for a particular examination undermines the whole of the teacher's work, running through it like a vicious disease and palsyng it. If the teacher will determinedly frame his own syllabus (conceived in the best educational spirit of which he is capable), then he need fear no examination, for his students will do themselves and himself credit, and will have benefited by his teaching in the highest degree.

Having, then, gauged the subject—or stage of the subject—by consulting the authorities, the teacher should compile a syllabus which combines all the basic and essential suggestions which have been indicated in the aids he has consulted, and arrange them, along with any points which he conceives he can specially introduce and deal with effectively in his own special case. The whole should present a logical, orderly, and consistent course of work, developed naturally and consequentially, stage by stage, and step by step. If, after this, he choose to compare his syllabus with that adopted elsewhere by other teachers, he will have done all that can possibly be done to produce the best thing. Too much reliance, however,

is not to be placed on other syllabuses which appear to be those of fellow teachers, as but too often these syllabuses are not drawn up by the teachers who might have been expected to have compiled them, but have been taken *holus bolus* from some examination or other source, by an individual who has merely been responsible for issuing a programme or calendar, and who has no competency for the task at all. The desirability of noting and amending a syllabus during the actual test of teaching it, has already been referred to.

A syllabus is not to be regarded as a mere compilation, produced because one must be shown, or kept ready for production. Its

**Using
a Syllabus**

function is to measure out the relative parts of a subject, and to indicate how much of it the course should comprise and complete. Hence, the syllabus should be as constantly consulted as the compass is at sea. If that is not done, the teacher will assuredly come to grief—he will strand where he should float away, and he will lose the direct line to port and the termination of the voyage. The amount of work covered and remaining to be covered should be constantly checked with the time remaining at the teacher's disposal. It is not necessary—and it may be very unwise—for the teacher to attempt to complete the whole of the syllabus he has set himself. The time actually available may vary from that anticipated, the students may not come up to the standard assumed, and any of a score of circumstances may, in practice, call for modifications. Frequent consideration of the syllabus will serve the purpose of a brake when too superficial and hasty progress is being made, and will act as a stimulus to faster progress when too much time has been devoted to the sections of the work dealt with. Lastly, the syllabus should be consulted every time a lesson is being prepared, so as to keep the teaching to the order and arrangement deliberately planned, so long as such planning works as intended.

The place for the working syllabus should be the teacher's lesson note-book, for then it is where it will be wanted, and it

**Place for
Working Syllabus**

accompanies the teacher precisely on those occasions when it is most likely to be required—when he makes out his notes and when he delivers his lessons.

The more subordinate any teacher's position happens to be, the

less likely is he to be called upon to furnish reports; those which may be required for any work in which he is engaged being furnished by someone else whose position is of greater responsibility. Be this as it may, there are many purposes for which reports may actually be required, and the question, therefore, needs some discussion here. Amongst the purposes for which reports may be called are the following—

1. General reports upon an institution or department of an institution for a given period.
2. Particular reports upon individual classes or groups of classes.
3. Reports upon reports (*e.g.*, the teacher's views and criticisms may be asked for upon a Government Inspector's report).
4. Reports upon the working of a particular scheme, such as an internal examination scheme or a special course of work which has been in the nature of an experiment.
5. Observations upon bad examination results, inefficiency, or suspected inefficiency, of particular work, etc.
6. Report upon special apparatus requisitioned or supplied.
7. Views and criticisms upon the proposals of an authority, such as financial proposals or working financial schemes.
8. Sessional or other reports upon the particular classes which the individual has himself taken. This, perhaps, is the commonest form of teacher's report.

Each report will have more or less distinctive characteristics, but there are certain important general requisites which should be fulfilled in any report. These include—

**General
Requisites
of Good Reports**

1. *Relevancy*.—Whatever feelings a teacher may have on particular questions, they should never be intruded. If they are relevant, their place is in the report; if dubious or irrelevant, then they should not appear. A report is not a favourable opportunity to air a grievance, ventilate views, make suggestions, criticise, take unction, plume one's feathers, make a hit, or try to secure any other desired object, however important, unless it is strictly in the remit. The teacher, like Shylock, should always ask: "What saith the bond?" Lapse from the very strict path in this respect, vitiates the whole document. Phrases such as "Perhaps it may be observed"; "I should like to add"; "It is, perhaps, somewhat out of the strict scope of

this report to refer to, etc.”; all indicate that there is more than suspicion that the succeeding remarks are out of place. The benefit of the doubt should certainly be given to omission in all such cases.

2. *Brevity*.—Reports, even at their best, are usually very tedious instruments, frequently afflicting the reader to such an extent that he either becomes bored or is made antagonistic. It is more than wise, therefore, to boil a report down to the uttermost minimum. A few pregnant sentences will achieve their purpose far better than the most elegant essay, and if there is little to be said, a little said is absolutely sufficient.

3. *Moderation*.—It is fatal to a report to over-emphasise anything, however important the subject may be. To prove too much, to protest too much, to explain too much, to claim too much, and any other forms of disproportion, bring more than their meed of diminished credence. Even experienced people make the error of concluding that unless an important matter is emphasised—and, in practice, emphasis becomes a synonym for exaggeration—it will fail to receive adequate appreciation. That is to say, that, unless there is a margin “for certain discounting,” the report will suffer. The idea is an utter delusion, albeit a pardonable delusion in the sense that it is a natural tendency at all times. It does not become a question of whether or not reports are, in the nature of things, normally discounted. A “case” moderately and judicially stated can seldom fail to carry its own conviction. Quite other circumstances—over which even committees and councils have no control—only too frequently cause quite important or urgent matters to fail to secure that attention which they merit; and much less frequently does failure to appreciate or measure the case as presented enter into the question.

4. *Literary grace*.—There is no excuse for less than the best literary grace with which the writer can express himself. Literary power is pre-supposed in a teacher, and it is substantially impossible for its lack to carry anything but a damaging impression. Literary composition is not to be flicked off, however great an individual’s talent for it may be. The art of literary grace is largely the art of revision. Hence, reports, however insignificant or routine in character, should be revised with care, and blemishes, vague expressions, obscurities, ambiguities, tautology, and the like

breaches of form, should be unhesitatingly and scrupulously amended.

5. *Considered views*.—Scrupulous care should be taken to ensure that one's views have really been matured before being given expression. Crudity, illogicality, pettiness, narrow-mindedness, ill-considered statements, error, all and any suffice to bring distrust if not worse.

6. *Promptitude and punctuality*.—Even if no time is fixed, or time appears to be a matter of indifference, a report which has been called for should be submitted with the utmost promptitude compatible with efficiency. Nothing is gained by delay or by tardiness: opportunity should never be sought but should be forestalled. The same views apply to those cases in which a definite or an appropriate time is fixed or calculable.

7. *Completeness*.—A report should be self-contained—complete in itself. The terms of reference should either be sufficiently incorporated or the title should be sufficiently comprehensive, so as not to require the reader to seek for explanation or detail elsewhere. In very definite and important cases (*e.g.*, controversial), the precise terms of the remit should be incorporated, and the like when they comprise a definite resolution from the instructing or requesting body. Quotations, if any, should be complete. Mere "references" should not be made to external sources: if external statements are necessary, it is necessary to quote them. Statistical facts should be given fully enough to make them really of value. These, along with supporting evidence, schedules, and other secondary matter may be comprised in an appendix, although occasions for this elaboration will be rare.

9. *Orderliness and clerical form*.—The report should be orderly in arrangement, and in good clerical form. Paragraphing, paragraph heads, and the like aids to ready reference and good presentation, should be duly considered, and, in general, the whole should indicate practical, workmanlike efficiency.

10. *Technical form*.—Technical form is not indispensable, and, for a subordinate official or person, is largely out of place. Hence, it is generally only necessary to make a comprehensive heading and then to go straight to the subject without definitely addressing the document to any particular individual or body—a covering letter, when transmitting by post, will suffice. The report should,

of course, be signed, and a date, approximately or exactly corresponding to the date of transmission, should appear—preferably at the bottom left corner, or near the level of the signature when this does not fall at the bottom of a page.

Some miscellaneous examples, chiefly sessional reports, are given below. They are mainly based upon actual Examples reports, and most of them are substantially unaltered from the originals.

LECTURER'S REPORT ON THE OFFICIAL (INTERNAL) EXAMINATION
HELD AT THE CLOSE OF SESSION 19 -19
IN THE SUBJECT OF _____

Whilst one or two questions were generally favoured, all were attempted by one or other of the students. The results are typical of beginners in this subject, but are chiefly defective because of insufficient text-book and other reading. It must be remembered, however, that in the majority of cases the students were taking at least two other subjects of more direct practical value.

The answers are marked by general inadequacy of expression, and this proved a very real disability.

All the students took the examination, a schedule of the marks awarded being appended together with a copy of the examination questions.

(Date) _____ Lecturer.

Session 19 -19 Official Examinations.

Schedule of Marks awarded in _____

Name.	Question No.:								Total Marks.	% of Marks.
	1	2	3	4	5	6	7	8		
ABLETT, JOHN (etc.)	9	-	10	-	8	8	10	9	54	90

[Note.—Only six questions were to be attempted. The questions were of equal value.]

The following are successive annual reports upon Typewriting Classes—

Year.	Class I.	Class II.	Class III.
X.	The papers as a whole do not reach the standard of previous years, largely due to a considerable proportion of the candidates giving insufficient time to the necessary practical work. In a subject of this nature, progress in theoretical matters is of little value unless practical work keeps pace.	Some good practical work was done, and the results are very satisfactory.	The somewhat severe paper set was moderately done, but the work shows evidence of insufficient practice.

<i>Year.</i>	<i>Class I.</i>	<i>Class II.</i>	<i>Class III.</i>
Y.	A good average standard of attainment was reached. Attendance during the session was good, and steady and efficient practical work was done week by week.	The examination results are poor and unsatisfactory, the paper set being beyond the capacity of many students. In view of the regular and satisfactory work done during the session, a much better standard of examination results ought to have been attained.	The examination results are poor and unsatisfactory. Students at this stage fail to give the requisite time to practical work. Under the circumstances expert skill is impossible—an unfortunate result, as it directly diminishes both the standard of capacity which should be reached and the reputation of the classes in the eyes of employers.
Z.	The examination work is noteworthy for the high marks obtained by individual students and in the average. The practical work done during the session was performed with the utmost regularity and completeness in all classes, and makes an excellent record. The weekly marking involved was excessive and burdensome in view of the teacher's many other duties.	The students maintained the standard of practical work done last year in the lower stage and, in consequence, the examination results are entirely satisfactory.	The increased practical work insisted upon this year in view of last year's adverse report has resulted in excellent examination papers. The improved organisation of this stage should be maintained.

GENERAL SESSIONAL REPORT UPON A PARTICULAR SUBJECT

----- TECHNICAL COLLEGE

Session 19 -19

LECTURER'S REPORT ON CLASSES IN -----

The examination work submitted in the three Classes of this subject attained a good all-round standard, and, except from the lowest Class (Class II), there were no papers falling so low as to be regarded as distinct failures.

During the Session the attendance was, on the whole, good—that of the highest Class (Class IV) being of remarkable excellence. Homework reached a heavy volume each week, and became a most burdensome item in the work of the Session; nevertheless, it was not handed in in Classes II and III with the completeness which is desirable, and a falling off was particularly noticeable after the end of January. The classification in the lowest stage was much too wide; some of the students were entirely unfit for the work, and should have properly been attending a preliminary class. This probably accounts for a considerable falling off in the attendance, and, as regards the examination, for some of the poorer papers which were submitted.

<i>Class.</i>	<i>Roll.</i>	<i>Average Attendance.</i>	<i>Attendance Percentage.</i>
II . .	47	36	76.6
III . .	75	60	80.0
IV . .	25	23	92.0

10th May, 19

----- TECHNICAL COLLEGE

Session 19 -19

EVENING ENTRANCE EXAMINATION, COMMERCIAL DEPARTMENT

Report of Head of Department upon the Worked Papers

The circumstance that the Syllabus for the Entrance Examination is precisely that of the Second Year Lancashire and Cheshire Preliminary Commercial Course acts unfavourably against those candidates who have not previously been to an Evening School, since all the papers set presuppose some commercial training. This is illustrated by reference to the subjects of Correspondence and Geography, the one requiring specific instruction and the other the study of a particular syllabus. After making full allowance for these disadvantages, however, the general opinion which I have formed of the work is that in no case does a candidate show sufficient general training to be excused the Preliminary Course. The weakness in this respect is so pronounced that it entirely condemns the exemption granted to Borough students from the Preliminary Classes, and I would urge that the matter requires reconsideration. In addition to the lack of special training, the students do not appear to have realised the importance of orderliness and method in the arrangement of their answers, although this is one of the most elementary considerations which should be impressed upon students who are seeking to enter upon a commercial career. These defects are the more pronounced since the standard of the examination papers is below that which would be implied by the syllabuses, and altogether inferior to that which we have ourselves been accustomed to require from our own preliminary students.

To particularise the criticism of the worked papers, I would add the following remarks—

Arithmetic. The papers show cumbrous methods, lack of arrangement, and logical sequence, and generally bear an indifferent appearance. Questions 3 and 4 bring out these weaknesses particularly.

English. Untidiness, wretched spelling, and bad English characterise the work sent in. On the set topic for composition, the work is generally inferior to that submitted by students for admission to the Technical Departments, and lacks grasp, expression, and observation.

Correspondence. Only one candidate showed any ability to work the paper. Seven of the ten candidates would appear to have had no instruction in the subject at all, and it is unfortunate that the necessity for conforming to the Lancashire and Cheshire Syllabus makes this a compulsory subject.

Geography. This subject hardly gave the candidates scope, since the questions were, by the syllabus, specifically restricted to the six Northern Counties.

Shorthand. Three of the four worked papers in this subject indicate that the students submitting them had made dangerous progress, and would have been better not to have been allowed to get on so fast. These candidates need to begin the subject again.

Total candidates entered, 17; passed, 3.

(Date) -----

Head of Commercial Department.

REPORT UPON THE SPECIAL SHORT COURSES FOR WOMEN CLERICAL WORKERS

Session 1915-1916

During the session four Short Courses have been held for Intending Women Clerical Workers as follows—

1st Course from	Dec. 9th, 1915, to	Feb. 11th, 1916.
2nd	Mar. 6th, 1916	May 12th, "
3rd	May 29th, "	June 30th, "
4th	May 31st, "	July 28th, "

The 1st, 2nd, and 4th Courses were for beginners, and the subjects of instruction comprised Calculations, Shorthand, Office Work, Typewriting, and Accounts. The 3rd Course was for students who had completed a theory course in Shorthand and had received some instruction in Typewriting.

The chief statistical facts in connection with the Courses are—

Course.	No. of Applications.	No. of Students Admitted.	Completed the Course.	Left for posts during Course.	Not in posts at end of a month after Course finished.
1	47	47	26	18	5
2	59	36	32	4	9
3	17	17	10	6	5
4	25	21	21	—	*

* Information will be compiled in due course.

In general, students under 18 years of age were not admitted; but some little relaxation of this rule was made in the later courses. The reduction of admissions compared with applications in the 2nd and 4th Courses was effected by an entrance examination in Arithmetic, Handwriting, Dictation, and Composition. The classes of the 1st and 2nd Courses met on Mondays, Tuesdays, Thursdays, and Fridays, from 9-12 a.m. and 1.30-4.30 p.m., those of the 3rd and 4th Courses met daily, Mondays to Fridays inclusive, from 9.30-12.30, with some supplementary arrangements in the afternoon for Typewriting. Miss X conducted the 3rd Course and also the Typewriting in the 1st and 2nd Courses, the remainder of the instruction being given by the Head of the Commercial Department.

In general, the students were of a very suitable type with respect both to age and educational standing. They were very keen, appreciative of every effort made in their behalf, and responsive in effort and unstinted homework to every demand made upon them. Much care was necessary to ensure that too much ill-digested instruction was not given; and considering the reality of this danger, the amount of solid work well done was astonishing. That this resulted in considerable clerical capacity was shown by the appreciative reports received from employers. Most of the posts filled were of a general character or chiefly required pen work; some of the most proficient students, however, took up posts as Shorthand-typists, but, of course, their respective speeds were below those which would, in normal times, have been regarded as necessary. Municipal offices, engineering works, and collieries absorbed the bulk of the students, the remainder either going into home businesses or becoming distributed over sundry occupations as insurance, chemical and dye works, cotton mills, and the clerical sides of retail businesses. One interesting case deserves special mention—that of a student who, on account of a sudden emergency, took a post as Commercial Mistress in a large Boarding School for Girls. Her commercial qualifications were obviously of an entirely inadequate order for teaching purposes; but four years' residence abroad had made her specially fitted on the language side, as well as having, doubtless, given her breadth of mind and resourcefulness.

A valuable but limited use can be made of graphical records. Usually, they more particularly refer to such matters as attendance, homework, and examination results, and may either apply to a particular session or course, or represent, for comparison, the work of successive sessions. The normal form of tabulated and other records makes comparison troublesome, and fixes no very definite ideas afterwards: the graph summarises in the most compact form, and diagrammatically represents the comparison in such a way that it is self-evident and striking. An illustration is shown of a common and useful graph. Most of the details are entered up periodically—weekly or otherwise—and take but a moment or two; the whole presents to the eye a more striking and convincing picture of the class records than any other form of presentation possibly could.

Graphical Records

In addition to the general class record, a system of obtaining individual records of the careers of all students is invaluable.

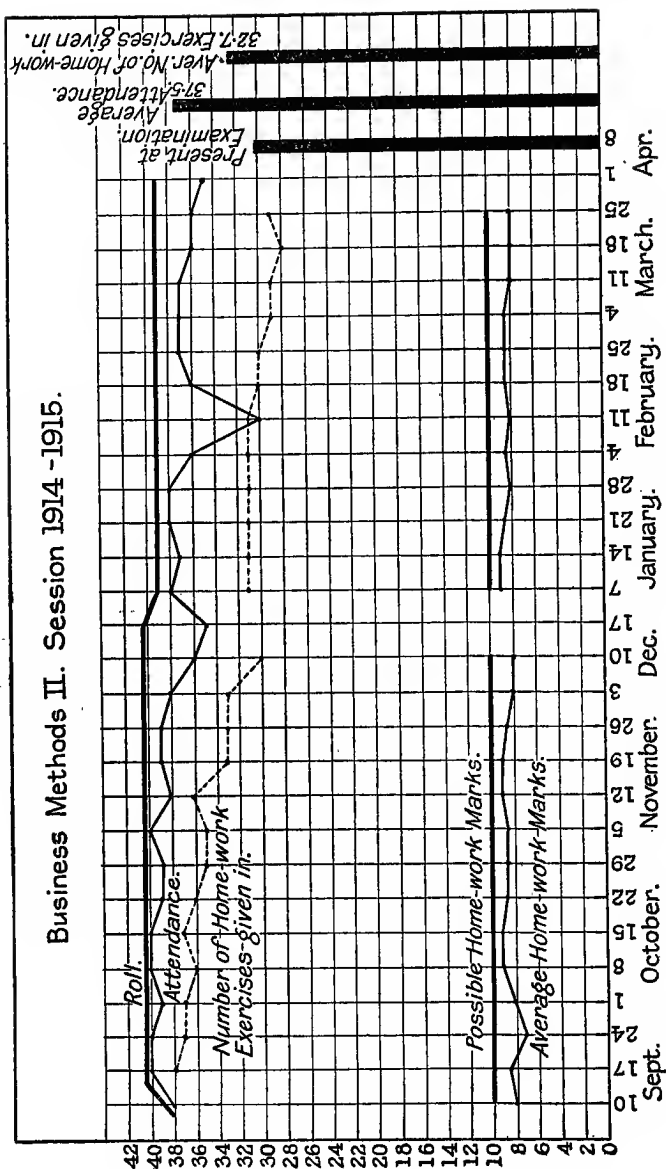
Card Records

Generally, this work is discharged by the administrative authority in conjunction with the teachers, and in that case a prescribed form is issued by the authority. The card index is usually resorted to, and commercial teachers do not require to be persuaded of its outstanding suitability for this and other forms of summarised and classified information. Usually, however, the form of card in use is poorly designed and badly printed. The author has been responsible for the records in a large technical institution, and submits on pp. 166 and 167 the card he has designed and found to work admirably. The design, though local, is adaptable to all circumstances. In this particular case it forms the institution "general register" of all students, irrespective of department (technical, art, commercial, trades school, etc.), or whether day or evening, part or full time, etc. The primary information is obtained from the students' enrolment forms, and year by year is checked against the corresponding particulars for the new session; the remaining information is obtained from the class registers arranged to suit the scheme of records. The following points may be suggested as the result of experience in keeping such records—

1. The students' names should be hand *printed*.
2. Separate coloured inks should be used for each session's records, not less than four, and preferably five colours forming the

A USEFUL GRAPH.

Business Methods II. Session 1914 - 1915.



cycle. This applies to *all* the particulars (*e.g.*, a student who enters in the session for which red is the recording colour, will have his name, etc., entered in red, as well as the particular statistical information).

3. The notes and memoranda at the foot of the front side of the card need to be entered very carefully and very briefly, as will be seen from the example given.

4. The attendance fraction is very valuable, and is composed of the actual attendances as numerator and the possible as denominator. The number of hours made furnishes a record of the length of the lessons (*i.e.*, hours $\div$ actual attendances), and also allows the total time given to the study of any subject to be ascertained. Each card is, therefore, a self-contained record in all respects.

5. The entry of subjects on the front side of the card should be made as quickly as possible after the commencement of the session. The entry should be an *exact* copy of the subjects entered and approved upon the enrolment form. As variations will occur from one cause or another, it is necessary to check the entry later on with the class registers, and a check tick should be entered both on the card and in the register. Where a student enrolls for a subject, but fails to attend the class, the card entry should be ringed and a foot-note made of the cause, if known.

6. In the external examination record, entries should be made of failures as well as of passes—the one aspect is as valuable a record as the other.

7. Separate colours of cards may be used for each department as far as possible, but the range of colours suitable for use in artificial light is rather too limited. In this case, two or more smaller departments will take the same colour. Where a number of departments are filed in one alphabetic order, in addition to the colour guide, the cards should be tabbed for as many departments as necessary and, each tab being allocated to a definite department, the non-departmental tabs are cut off during the printing.

8. The *same card* always serves for the same student, to whatever department of the institution he may chance to migrate, and, in these cases, the colour at once indicates that such a change has occurred. An adjustment of tab is effected by pasting a paper one in the correct position for the change.

Christian Name **JOHN JOSEPH**

Surname **ROBINS**

Born **1 July 1895** Admitted **9 Sep. 1910.**

Entrance Qualifn. **Secondary Education**

Last Evg. Sch.

Entrance Remarks **Oxford Junior Hms. 1909.**

" Day * **Wigan Grammar**

Address

Borough or U.D.

Occupation

Employer

25 Kirk Lane, Wigan

B

Office Boy
Shaw's Export
Cloth. Co.
Insurance District
1914

Year	Receipt No.	Student pays	Emp. employer pays	SUBJECTS TAKEN										Course and Year
				Subject	Cl.	Subject	Cl.	Subject	Cl.	Subject	Cl.	Subject	Cl.	
1910	8	10/-	-	Mathematics	B	English	B	Methods	B	Handbook	F	-	-	Pol. C.
1911	1	F.S.	-	do.	I	do.	I	do.	I	do.	I	Book-keeping	I	Com. I
1912	25	F.S.	-	-	-	do.	I	do.	II	do.	II	do.	II	II
1913	5	F.S.	-	-	-	Economics	I	Com. Law	I	do.	III	do.	-	III
1914	10	F.S.	-	-	-	do.	II	do.	II	do.	IV	do.	-	IV
1915	312	10/-	-	-	-	French	II	Maths	II	-	-	-	-	VI

Notes: The Scholarship awarded on results of Secondary
Work 1910-1911; also 1911-12; also 1912-13; also
1913-14

Prizes and Distinctions: 1911. L. & C. Wether Com. & Soc. L. & C.
1912 L. & C. Junior Com. & Soc. L. & C. for 24th. Junior
1913. L. & C. for 24th. Junior
and Shortland 60.

* Unregistered, attending James Busas if possible

1913. L. & C. for 24th. Junior

CHAPTER XV

RECORDS OF WORK. INSPECTORS AND INSPECTIONS

IN most forms of educational work it is now common to require written records to be kept of the work done in the lessons.

Records of Work

Amongst the purposes served are—(a) A permanent statement by the teacher himself, of the way in which he has disposed of his time, of

the methods of work which he has followed, and of the order and development of his teaching.

(b) A record which will enable a temporary or permanent substitute to follow on with the work at any time.

(c) An instrument compelling the teacher to exercise care and discretion in planning out his work, and in carrying it out.

(d) A record, for the periodical visits of inspectors, enabling them to see quickly and easily the nature of the work which has been done up to date, and, incidentally, to compare the lesson then being given with those recorded.

Obviously, an instrument of this kind can lend itself to many purposes and, incidentally, may equally serve as a means of condemnation as of favourable recognition. Nevertheless, the general principle is sound. Education is the costliest national service, its results are of the greatest national value; and by its nature there are many factors which it is entirely impossible to gauge, so that those which admit of measurement are correspondingly of great importance. Written records of the instruction, then, are right in principle.

The essential nature of a written record of work done is that it shall, in a sufficiently compact form, represent the individual's measure of the tangible effects of his teaching,

Their Nature

so far as a summary of the ground covered can do this. At first experimental, the system has now developed until, by successive elaborations, the records have become something more than an epitome, and something less than a text-book. This is a pity, because, so soon as a useful piece of educational machinery becomes an infliction by abuse, it fails to

secure its legitimate function and leads to evasion—or worse. The dangers resulting are to be noted, for they are important—

1. Comparatively more attention may be given to the record, in order to protect the teacher from criticism or condemnation, than to the actual teaching.

2. The record may be taken at more than its real value. For example, it is impossible to tell what proportion of time and attention any particular portion of a lesson subject has received, or whether the teaching was as effective as the precision of the record may imply.

3. After extensive records have once been made, it seems unreasonable to expect that they shall be compiled a second time with any degree of revision or other change. The written record, therefore, tends to become an instrument of stagnation instead of progress.

Between the extremes of consideration and exaction, many degrees of form may be devised, from a mere record of subject heads to a full notes of lessons. Three examples are given—

Forms

1. SHORTHAND: CLASSES III AND IV Session 19 -19

Date.	Class III.	Class IV.
Sept. 11	Final <i>shun</i> hook	<i>Shun</i> hook. Writing in position
„ 18	Additional double consonants	Additional double consonants
„ 25	Revision of <i>shun</i> hook and exercise upon	The aspirate. Figures
Oct. 2	The aspirate	do. Negative prefixes
„ 9	Upward and downward <i>l</i>	Negative prefixes. Gramma-
„ 16	Dictation of letter	logues. Dictation
„ 23	do. do.	Grammalogues. Phrases. Out-
„ 30	Upward and downward <i>r</i>	lines
Nov. 6	Halving principle	Grammalogues. Contractions.
„ 13	do. and letter	Reporting
„ 20	Double-length principle	Dictation 40-80 words per min.
„ 27	Vocalisation of <i>pel</i> and <i>per</i>	16 contractions. Dictation 40-
Dec. 4	<i>Way</i> and <i>yay</i> diphthongs	80 words per minute
„ 11	Disyllabic diphthongs	14 do. Dict. do. Commercial
	do.	letter
		Phrasing. 18 contractions.
		Commercial letter
		Commercial phrases. Speed 60
		Advanced phrases. Rep. ad.
		letter
		Advanced phrases. Section “ Re-
		porter.” Society of Arts. Exam.
		Test 80

<i>Date.</i>	<i>Class III.</i>	<i>Class IV.</i>
Dec. 18	Disyllabic diphthongs and recapitulation	(No entry in the original)
Jan. 8	Prefixes	Intersections (regular). Dictation practice
" 15	Suffixes	Similar words (two pages)
" 22	do. Grammalogues. Dictation. Contractions	do. Speed practice 60-90 words per minute
" 29	Reading practice. Grammalogues. Dictation. Contractions	Contractions advanced
Feb. 5	Contractions. <i>Of the. Tick the</i>	do. do.
" 12	Phrasing, etc.	Speed practice 60-80 words per minute
" 19	Phrases. Ex. 70	do. do. do.
" 26	L. & C. Test Paper, 1902. Contractions	Speed practice 60-90 words per minute
Mar. 4	L. & C. Exam. Paper, 1911. Contractions	Speed practice Test Examinations 60-80
" 11	L. & C. Exam. Paper, 1910.	do. do.
" 18	L. & C. Exam. Paper, 1909, and Part II, 1911	do. do.
" 25	L. & C Exam. Paper, 1908, and 1912 Part I	do. 1912 Exam. Paper

The above is an interesting record, and enables many conclusions on the teaching to be drawn, both from what is stated and from what is omitted. Incidentally, it will at once strike the critic that the future reader has not been sufficiently in the mind of the writer, particularly in some cases where it is impossible to tell whether instruction or practice or other form of work was carried on.

2. TYPEWRITING, STAGE I. LECTURES AND PRACTICAL WORK

Half Session, 19 -19

<i>Date.</i>	<i>Lecture Subject.</i>	<i>Homework and Practical Work.</i>
Sept. 10	<i>Class Organisation work only—</i> Students' Class Slips of information. Allocation of machines and fixing of precise time of practice for each student—65 arranged for. Text-book and materials required. Allocation of numbered work holders. Classroom regulations. General matters — getting out and replacing machines, method of handling, etc.	

Date.	Lecture Subject.	Homework and Practical Work.
Sept. 17	<i>Essential preliminary points in Manipulation—</i> Seating attitude, position of hands, method of fingering keyboard, returning carriage, etc., each type of machine being dealt with and common principles indicated. Cautions, etc., necessary in view of the machines being used for various stages. Keyboard memorisation exercises on top bank	H.W. Keyboard memorisation exercise P.W. Ex. I
„ 24	<i>Keyboard Memorisation and Machine Mechanism—</i> Exercises on memorisation of top bank. Second bank introduced. Line spacing and margin stop fixings and purposes desirable to be served and actually served. Examination and explanations of exercise work to be done during week. (Adopted as a necessary part of each lecture throughout year.)	H.W. Keyboard memorisation exercise P.W. Ex. II
Oct. 1	<i>What is good Typewriting?—</i> Characteristics of good typewriting, the discussion being based on the experience of students during the fortnight's practice. Keyboard memorisation exercises and tests	H.W. To answer questions on the lecture subject, and work keyboard memorisation exercise P.W. Ex. VI
„ 8	<i>To improve execution—</i> Criticisms, etc., upon the exercise work to date. Causes of defects—personal and mechanical. Keyboard memorisation exercises	H.W. Fingering exercise P.W. Portion Ex. VII and whole of Ex. VIII
„ 15	<i>Handling of typed papers. Ribbon effects—</i> Handling of typed papers from the practical point of view, methods of fastening, etc. Study of ribbon from manipulation point of view. Keyboard memorisation exercises. Third bank of keys	H.W. Fingering exercise P.W. Ex. IX, selected sentences
„ 22	<i>Experimental Lesson on Margin Stops and Releases—</i> Experimental examination of the characteristics of the margin stops and releases on the various machines, with tabulation of the results. Keyboard memorisation exercises	H.W. Fingering exercise P.W. Ex. XII
„ 29	<i>The Simple Tabulator, or Column Finder—</i> The various types as shown on the machines, with manipulation, practical utility, and cautions. Keyboard memorisation exercises	H.W. Fingering exercise P.W. Ex. XVII

Date.	Lecture Subjects.	Homework and Practical Work.
Nov. 5	<i>Typing of Punctuation Signs</i> — Classification of the signs; impression and execution; spacing; producing signs not on keyboard. Keyboard memorisation exercises. Dexterity exercises—value, and method of executing	H.W. Fingering exercise P.W. Part Ex. XIX Ex. XX
„ 12	<i>Teacher's correction of typed Exercises, and their due attention</i> — Introduction of a system of signs to facilitate correction of exercises. Benefiting by the corrections. Keyboard memorisation exercises	H.W. Fingering exercise P.W. Ex. XIX and repetition of Ex. XX in accordance with verbal instructions
„ 19	<i>Student's corrections in typing</i> — Cause of "typist's" errors. Erasing. Keyboard memorisation exercises	H.W. Fingering exercise P.W. Portion of Ex. XXIII
„ 26	<i>Word Substitution</i> — Study of printing point and application to method of word substitution. Keyboard memorisation exercises	H.W. Fingering exercise P.W. Completion of Ex. XXIII — Ex. XXXI
Dec. 3	<i>Making a Close Copy</i> — Business requirements in copying. Methods of copying and of making a close copy. Keyboard memorisation exercises	H.W. Answering descriptive question P.W. Ex. XXVIII
„ 10	<i>Re-feeding into Machine</i> — Practical business requirements. Mechanism and method in re-feeding. Keyboard memorisation exercises	H.W. Fingering exercise P.W. Re-feeding according to verbal directions. Ex. XXXII
„ 17	<i>Typing of Figures, and use and limitations of Column Finder therein</i> — Characters requisite. Keyboard provision and deficiencies. Importance of accuracy and non-erasing. Column finder—use and limitations	H.W. None set P.W. Ex. XXXVII

3. LAWS AFFECTING THE GROCERY AND PROVISION TRADES

STAGE I

Session 19 -19

Homework.—Questions set in accordance with the typed sheets attached. Text-book study as directed from time to time.

Lecture
No.

Lecture Subject

1. *Law—what it is and its origin.* Natural origin and necessity of social rules of conduct. Social rules of conduct which have the force of law by virtue of custom. The regulation of conduct by authority.

<i>Lecture No.</i>	<i>Lecture Subject</i>
2.	<i>Sources and Administration of English Law.</i> Statute law arising out of sovereignty. Past and present authority. Royal prerogatives.
3.	<i>Administration of English Law (cont'd).</i> The Courts of Law, and the machinery of administration.
4.	<i>Local Government—necessity, functions, and administration.</i> Centralised and decentralised government. Bodies concerned in Local Government. Local Government sometimes the executive of the Imperial authority and sometimes has initiative.
5.	<i>Classification of Legal Offences.</i> Crime. Punishable by court of summary jurisdiction. Indictable. Examples of crime. Torts—definition, examples. Certain acts may be both crime and torts.
6.	<i>Law of Contract.</i> Common law and statute law. Obligations. Contract. Classification. Form.
7.	<i>Law of Contract (cont'd).</i> Essentials of contract. Contracts the law will not enforce. Capacity to contract.
8.	<i>Law of Contract (cont'd).</i> Flaw in contract—impossible agreements, mistake, misrepresentation, fraud.
9.	<i>Law of Contract (cont'd).</i> Rights and duties. Discharge of contract—mutual agreement, performance.
10.	<i>Law of Contract (cont'd).</i> Discharge of contract—breach, lapse of time, impossibility, bankruptcy.
11.	<i>Sale of Goods.</i> Necessary definitions. Formation of the contract (s. 4, Sale of Goods Act, 1893).
12.	<i>Sale of Goods (cont'd).</i> Transfer of ownership. Transfer of title.
13.	<i>Sale of Goods (cont'd).</i> Conditions and warranties. Performance of the contract.
14.	<i>Sale of Goods (cont'd).</i> Rights of seller. Rights of buyer.
15.	<i>Law of Master and Servant.</i> Relative Acts. Parties. Formalities. Duties of master.
16.	<i>Law of Master and Servant (cont'd).</i> Employment of women and young persons. Duties of servant. Termination of the contract.
17.	<i>Law of Master and Servant (cont'd).</i> Liability of master—servant's negligence; Employers' Liability Act, 1880; Workmen's Compensation Act, 1906. Disputes.
18.	<i>The Grocer and the Public.</i> Public health—Public Health Act, 1875; sanitation, prevention of disease.
19.	<i>The Grocer and the Public (cont'd).</i> Food and Drugs Acts—1875, 1879, 1899. Unsound food. Margarine Act, 1887. Butter and Margarine Act, 1907.

The inspectorial system is a necessary part of educational organisation. Unfortunately, the term "inspector" does not carry a uniform signification, and its more sinister aspects

Inspectors tend to give it its most frequent interpretation.

These sinister aspects are pretty closely represented by the general attitude towards such inspectors as railway ticket inspectors, factory inspectors, inspectors of weights and measures, sanitary inspectors, surveyors of taxes, and the like; these offices scarcely coming under observation except in the exercise of the disagreeable functions which at times the holders have

to discharge. Hence, "detective" becomes almost synonymous with "inspector," and at once symbolises an antagonism between the inspector and the inspected. In education, the term is particularly unfortunate; hence, rooted as it has become, it may not be unreasonable to hope that some day it will be abolished as the title of those who discharge educational functions under it. A term which would indicate *educational* functions would be both more appropriate and more welcome; and would, in time, lead to a more agreeable and appreciative relationship between inspectors and teachers. Doubtless, in the past, the "subjective" opinion has never been considered.

The functions of the inspector are, and should be, mainly educational. In practice, they include other functions, the whole being classifiable, more or less completely, as follows—

Functions

1. *To promote education.*—This may be done by—

- (a) Helping and advising.
- (b) Inviting discussion and views.
- (c) Contributing to educational thought and research by frequent written and spoken contributions, based upon acute and sympathetic observation carried on under exceptionally favourable opportunities.
- (d) Criticising without sting.

2. *To set educational standards.*—At present this is done by—

- (a) Discussions and conferences with head and assistant teachers.
- (b) The like with governors, managers, and educational officials.
- (c) Written reports, some dealing periodically with each particular institution, others with an administrative area, etc.
- (d) Collaborating with examining and other bodies whose work is secondary, or supplementary.
- (e) Guiding and stimulating the training of teachers.

3. *To be the eyes and ears of governmental control.*—Inspectors are the agents of report and guidance to the national department of education, and much of the educational system of the country is based upon the work they do in this respect. Incidentally, they are responsible for ascertaining that governmental regulations are carried out,

4. *To disburse finances.*—Imperial control of education involves financial responsibility. Like all national expenditure, that of education is not based upon requirements, but upon allowances based on estimates. The sum thus obtained must “go round,” and the inspectorial functions are the most important instruments in its disbursement.

It follows that the inspectorial position is one of very great responsibility and importance, and it makes for a healthy view if the teacher regards the inspector as one whose duties are too onerous, and charged with so much more that is worth while, that detective work is the very last thing that he will be disposed to perform.

Inspectors' visits may be advised or may be unexpected. It should be immaterial to the teacher whether they happen to be one or the other, but it would be ignoring human nature not to admit that in either case inspectorial visits are a nervous strain to the teacher, however rationally and correctly he looks at them. And inspectors of experience are well aware of the fact, and make allowances; perhaps they are themselves to be the more sympathised with in that the best aspects of teaching so often, in the nature of things, elude them because of the too great self-consciousness or nervousness of the teacher. Then, too, however desirous an inspector may be to appreciate an earnest and capable teacher's work, the limitations of circumstances are very much against his being able to do what he himself may wish in order to render justice. Much may be done by the teacher himself to render the inspector's visit both fruitful and satisfactory. The following suggestions are offered—

Inspectorial Visits

1. Always to keep official records up to date and in good order. This includes registers, mark books, syllabuses, and other records of work, etc. During class hours, these should be in the classroom, and normally in such a position that the inspector can himself pick them up and examine them without interrupting the teaching or work of the class.

2. Continue the teaching as normally as possible. A formal salutation is usually all that is called for on the inspector's entry, and the briefer the better. As already said, the situation may be somewhat trying, but it should not be burked by efforts to engage the inspector otherwise. He will himself interrupt and ask for

conversation when he desires it, and then other matters have their opportunity for explanation, exhibition, or discussion.

3. Don't argue with the inspector. If he offers suggestions, receive them, consider them with a favourable bias in view of his exceptional position and experience; probably he is right. At the same time he must, to some extent, judge broadly, and, hence, may not recognise important details that cannot come within his cognisance, so that his views need not necessarily be adopted or followed in their entirety: his advisory functions will oftener be average than particular. In the same way, however, the circumstances of any particular teacher are more likely to be normal than abnormal, so that they are most likely to admit of the inspector's views becoming applicable.

4. Make explanations and give information as readily, clearly, and briefly as possible. It is quite unnecessary to attempt to "score" by exhibiting evidences of personal merit or achievement. Teaching is not a mercantile affair of competition between institutions, classes, or teachers; nor is it work that calls for applause, scenic effects, or other characteristics of staging. Hence, do not intrude "special features," or other aspects of your work. "Good wine needs no bush," and if the inspector does not discover all that you deem worthy, be satisfied that he will arrive at a shrewd and fairly correct estimate and appreciation.

Somewhat distinct from the ordinary visit of an inspector is the periodical inspection which has been adopted in recent years by the Board of Education. In the larger and

Inspections more important institutions, this function is a triennial one and covers several successive days, averaging altogether about a week. This investigation is very thorough and includes all aspects of the institution's work—administrative, financial, organisation, and teaching. These are the occasions when special conferences take place between the inspectors, the managers, and the chief teachers. As regards the individual teacher, this inspection is always previously notified, and so he can have all the necessary evidences of his work ready for production, and his actual lessons can be better given, perhaps, in that their preparation has been further assisted by the knowledge of the coming event. It only needs to be mentioned that no "star" lesson should be prepared; the lesson due under the normal

routine of the syllabus is just the lesson which should be given. Some months after the inspection, a printed report is furnished to the institution, and it is a matter for the administration whether or not any portion should be shown, or a copy given, to individual teachers. Not infrequently these reports are published in the local press, and in that way serve to rouse local interest in educational work.

CHAPTER XVI

STUDENTS' EXAMINATIONS

IF they were not essential, examinations could be called the educational curse. Their influence is so often vicious, whilst their value is so often dubious, that much is to be said in favour of their abolition. Certainly, they are only to be interpreted into definite evidence or conclusions with the utmost circumspection.

**The Examination
as Part of
Educational
Machinery**

One great consideration, however, which serves to retain examinations as part of our educational machinery is that they set a definite objective before both teacher and taught, and enable both to estimate and certify progress and efficiency. The abolition of examinations in the public elementary school has undoubtedly made for much educational freedom, leaving the development of the child to the best-devised methods, and the unfettered care of the teacher—at least wherever other portions of the educational machinery have not intervened to neutralise that freedom. For undeveloped childhood, particularly in the early years, the pressure inseparable from an examination system acts as an unmitigated blight, and the educational plant sickens and droops; in the final stages, when the child may, perhaps, never again come under educational influences, some form of standardised measure may serve important purposes, and a “leaving certificate,” based to a greater or less extent on examination tests, would seem a wise proceeding. Something analogous applies in continuation education. Some of the earlier work—the elementary specialisation—is of less educational value as a subject for measurement than for development and training. Later, the standard of attainment becomes important to define and estimate, and here an examination test becomes almost essential. In practice, examinations take place more or less from the beginning, and the practice appears to be justified on the grounds that the students being older are, on the one hand, not susceptible to injurious pressure, and, on the other, are likely to receive stimulus and encouragement by the evidences of successful study that a proper examination yields. Care, however, seems necessary in any such examination scheme, to distinguish clearly and readily between certificates of progress

and certificates of competency. The technical knowledge obtained by continuation study is aimed at giving a direct practical value, and anything which leads to deceptive over-valuation is directly injurious to the student and to continuation education itself. The question of examination standards and systems becomes, therefore, important.

Examination Systems

Three kinds of examination systems have evolved in continuation education—the external, independent examination; the internal examination; and

the territorial examination.

On the commercial side, the external examining bodies comprise, *inter alia*—

The Royal Society of Arts.

The London Chamber of Commerce.

(a) **The External Examination** The Union of Lancashire & Cheshire Institutes.

The Union of Educational Institutions.

The National Union of Teachers.

The East Midland Union of Institutes.

The first two and the fifth are entirely independent of the institutions and candidates they examine; the others are controlled by representatives of the institutions in union (including representative teachers), the examiners, however, being independent. In addition to these bodies, certain commercial teachers' organisations conduct independent examinations, but the lack of organisation amongst these bodies has lost to them, both in the present, and probably permanently, a field of work which most properly belongs to them and which they could have influenced, and probably controlled, if they had presented a unified and commanding status that would have obtained the confidence and respect of neutral authorities. If the lost opportunity should ever be regained, it will probably only be in a distant future, when the Registration of Teachers has achieved a general unification of teachers' interests, and both teachers' and students' examinations are controlled by registered teachers, acting in a national and State-recognised capacity. Meanwhile, the multiplicity of examinations brings into chaos any possibility of standardisation, and suggests to the cynic—albeit without foundation—that one can pay up and take his choice. There is no wonder that employers largely ignore the certificates thus issued and prefer to rely upon their independent—

and lay—judgment. In itself, the external system has everything to justify it, as regards commercial examinations. On the technical side proper, there exists—rightly or wrongly—an impression that the localised requirements of trade subjects need specialised types of examination tests which do not admit of sufficient generalisation and standardisation to make “national” or common examinations suitable. This may or may not be the case, but it is somewhat remarkable that the City and Guilds of London Institute has conducted such examinations for a long time, and, despite efforts to oust them, they have maintained a supreme position in public confidence and esteem, whilst the examinations of the Science and Art Department of the Board of Education have reached vanishing point, despite official State direction. The somewhat obvious advantages of independent external examinations include—

1. The independent character of the controlling body. This largely renders them free from the temptation to lower the standard when the results in any particular instance are poor.

2. The examiners are independent. Their papers are set at an estimated normal standard, their markings are entirely based upon a competent opinion as to what should be satisfactory work for the successes they award. Being only responsible to their appointing body, they can assess freely and judicially.

3. The standards set are verified by the representative nature of the papers submitted, since candidates are drawn from widely different areas. It is almost impossible for an examiner marking a large number of papers gathered from a wide area, to make any mistake as to adequate pass and first-class or distinction papers: the standard fixes itself.

4. The questions must characteristically be on essential principles (*i.e.*, on that groundwork of knowledge which *any* teaching should cover). Hence, the examinations are real tests of satisfactory knowledge and free from eccentricities or predispositions.

5. The very fact of the independence of the examinations commands public confidence.

6. The examiners are experienced. Local examiners cannot correct their standards sufficiently nor free themselves from bias and other influences.

7. With efficiency, they combine cheapness—no other form of examination can be properly conducted so cheaply.

In comparison, the disadvantages are small, and are practically represented by such considerations as: (a) A fixed time for the holding of the examinations, thus requiring those institutions submitting candidates to fall in with the scheduled time without option; (b) greater delay in getting out the results than if the examiners had fewer papers to mark and the clerical staff of the examining authority had less clerical work to do; and (c) the questions cannot take a local character. These are negligible at the side of the strong advantages which external examinations offer.

The controlled type of external examination is good, but less satisfactory than the independent, because there is greater danger of standards being brought down when the results are weak, owing to the control being in the hands of interested parties, who are entitled to have what they want (*e.g.*, they may fix a pass standard at the work submitted by, say, not less than 60 per cent. of the candidates, and such standard then becomes not an efficiency one but an arbitrary one). This is not a fanciful objection: in effect, it actually obtains in practice on those occasions when the work is particularly weak. Another important point is that the examiner's questions are revised, however experienced he may be; and, of course, such revision is made by the same interested parties.

This is the system of examination very strongly pressed, and, indeed, almost forced, upon all larger institutions by the Regulations of the Board of Education, assisted by the
 (b) **The Internal Examination** utmost pressure of their inspectorial staff. The general principles of the system as thus advocated are—

1. Examination papers set by the teachers in the individual institution, or papers partially or wholly set by them, with additions or other alterations to be incorporated by external individuals termed " assessors "; or, alternatively, papers entirely set by such assessors after consultation with the teaching staff as to the work done, etc.

2. The worked papers to be valued by the teachers and then submitted to the " assessor " for the markings to be confirmed or otherwise: if necessary, a conference is to be held between the teachers and the assessor in order to adjust differences of opinion.

3. On the result of this system, the institution is to issue certificates to its students, the certificates at certain stages to be certificates of a competency defined in the nomenclature thereof.

The essential idea behind this schème would appear to be the securing of freedom to the teachers and institutions, the principles largely following the lines of university practice in respect of internal students. There is nothing more desirable in education than that the teachers should have freedom and encouragement, that they should be imbued with confidence in themselves, and know that they have also the confidence of those in authority. Hence, the system of internal examinations would seem to be the perfection of confidence and the consummation of educational ideals. To the lay mind, however, it looks like folly gone mad. In general terms, the objections to the system are—

1. The teaching throughout, consciously or unconsciously, attunes to the final examination questions.

2. Unsuccessful lessons, and sections of the syllabus inadequately treated, are not questioned upon by the teacher—assuming him to be a normal individual. Neither will he examine on work not done, even though such work is fundamental or vital.

3. Conversely, the examination questions will necessarily centre round, and incorporate, the most successful and emphatic lessons, and no assessor can detect these when assembled in a complete examination paper. On the other hand, he is obliged to allow the teacher's questions when these comprise only a portion of the test, the teacher, in such cases, being obviously compelled to consider favourable questions only.

4. The homework questions, if regularly set and answered, will have previously covered the examination questions, directly or indirectly. It is not inferred that this means any corrupt intention on the part of teachers: it is, obviously, a corollary to regular work.

5. There is no driving force or pace set to the amount of teaching to be done during the session. It is *laissez faire* in teaching analogous to that of economics, but in an opposite direction; *laissez faire* in economics pre-supposing that the stimulus of personal interest will make the individual exert himself at his maximum efficiency, whilst in the case in point it is merely a stimulus to the teacher to do a circumscribed amount of work with the maximum efficiency,

and not a maximum amount at maximum efficiency. Again, it may be pointed out that it does not follow that any corrupt intention by teachers is to be inferred from this criticism.

6. The time and scope of any examination cannot exhaust even that body of subject matter which it is desirable to investigate even as a minimum. Hence, it is questioning in a manner corresponding to playing with loaded dice—the chances are all in favour of the examinee and of the teaching. Where the external assessor himself sets portions of the tests, he must necessarily confine himself to forms which the candidates *ought* to be able to answer, so that whilst the number of questions set by the teacher is proportionately reduced, there is, obviously, an excess of favourable bias still left.

7. The teachers' markings of the worked papers cannot be effected with the necessary detachment and neutrality, however scrupulous and conscientious he may be, and the assessor cannot free himself from the influence of too generous marking when he comes to revise, since he is pulled in both directions instead of being unfettered and neutral. In practice, the teachers' markings are more or less unmodified.

8. There are inadequate standardisations of—

- (a) The teaching.
- (b) Valuations.
- (c) Rate of progress.
- (d) Examining capacity of both teachers and assessors.
- (e) The treatment of dubious cases.
- (f) The certificates issued by different institutions, whether these are certificates of progress or certificates of competency. This affects the classification of students who change institutions, and also makes it impossible for the public to discriminate between, or even to value, such certificates at all.

9. The public will not accord that confidence in internal examinations, however efficiently conducted, that they should, and do, accord to external and independent examinations. From the public point of view, an external examination sets a standard and measures competency, whilst an internal one only shows off acquired paces—very different things.

10. Excessive waste of educational funds if, in particular, the assessor's work is to be properly paid.

This type of examination has, like the last, arisen out of the pressure of the Board of Education for the establishment of internal examinations, and, hence, is largely another type of these. It has been put into operation in the West Riding of Yorkshire, under a scheme of which the following is an outline—

**(c) The
Territorial
Examination**

1. An examinations' board is formed, composed of the principal and a governor of each institution in the county boroughs, the County Council's officer for technical instruction, and a member of the Council's Education Committee.

2. Assessors are appointed, who are required to—

(a) See that the examination papers cover the respective syllabuses.

(b) See that the questions attain a requisite standard.

(c) Amend the questions as they may deem desirable.

(d) Suggest the pass standard for the worked papers.

Assessors are to have had experience in evening class work, and are not to be members of the staff of any interested institution.

3. The examinations are conducted as follows—

(a) Teachers of the respective subjects in each institution prepare questions and submit them to their respective principals. The latter may alter the questions as they deem fit, with or without consulting the particular teachers. Eventually, a set of questions is fixed in each subject and stage, and submitted to the assessor, along with a copy of the respective syllabus.

(b) The assessor considers the questions and makes such alterations and additions as he may deem fit, duly returning the questions with any observations he may have to make.

(c) The institution then conducts the examination, the teachers subsequently marking the papers. Arrangements may be made to mix papers from different institutions (apparently involving the teachers in considering as many different examination papers as they may happen to have sets of papers in their mixed portion). This mixture, if carried out, is intended to assure a common standard.

(d) The marked papers are then sent to the assessor for his consideration of the markings, and fixing of the pass standard.

(e) A common course certificate is issued by the institutions,

this apparently meaning that it is merely in a common form as regards wording and printing.

The scheme is open to severe criticism. Thus—

1. The constituent elements will, in practice, tend to become mutually destructive. Either certain elements will become ineffective owing to the ponderous nature of the scheme, or else other elements will assert themselves and crush the rest out. Without this subordination of some interests, friction is unavoidable.

2. There are too many cooks to the broth.

3. The assessors cannot cope with their tasks, which involve, under a necessary time limitation, the consideration of many syllabuses, many papers of questions, many examination papers, and many teacher examiners of each question paper.

4. The final word in the examination papers really rests with the teachers in each particular institution, and unless these are to assert themselves in opposition to him, with the principal of the institution.

5. Assessors are fettered in every way, and if they take strong action, are likely to have many of Mr. Churchill's "swarms of hornets" round their ears.

6. The questions must be taken in hand so early, if they are to allow of the paper-provided consideration that they are to receive, that the teaching is subject to "colouring" and in danger of becoming definitely fixed for a long period after the questions are drafted.

7. It is very doubtful whether some of the elements of the scheme are competent for the duties which they are presumed to perform.

8. The lay man will say that there is too much "fudge" about the whole business, and he will view it with the same mistrust that he does the internal examination.

The emphasis which all these varied examinations and schemes place upon the system, show that octopus-like, it has its tentacles

round teachers and taught, and in such a grip

The Teacher escape is impossible. This precisely suggests the
and Examinations attitude which the teacher should take towards them—he should regard them as inevitable.

The vicious character of examinations is seen when they fix a groove for the teaching, and compel or tempt the teacher to mould all his teaching with a view to examination requirements, and to pit his shrewdness and powers of forecast against the examiner's. The man who works for examinations is not educating; the whole

of his teaching is vitiated in order to secure one object—examination results. It may be a counsel of perfection, but there can be no doubt that the examination should be the last thing in the teacher's mind. If he has faith in himself and in his work, his attention will be concentrated on the syllabus he has set himself or has before him—presuming this to be a satisfactory one—and he will find that his students will acquit themselves creditably in any examination upon it. The teacher's aim is competency and training; results of examinations are negligible by a competent teacher, partly because they can rarely be bad, and partly because corrective evidences are always available when the margin of variation in results is unusual.

The teacher may, at any time, be called upon to set an examination paper, whether to his own class or to another. There need be no specific rules for this work, but certain considerations may be enumerated. Thus—

**Setting
an Examination
Paper**

1. The compass of the syllabus should be properly ascertained.
2. The questions set should be fairly distributed over the syllabus matter.
3. There should be sufficient straightforward questions directly on the syllabus to enable a candidate working normally through it to secure a pass, if he has done the necessary work.
4. A margin of questions should be reserved for testing skill, grasp, intelligence, and other factors going to show real manipulative ability and knowledge.
5. Fundamental principles should always form a considerable part of the test, or, where the test is of a practical character, the work set should mainly be of a kind that the average candidate should be able satisfactorily to perform.
6. The "choice" of questions should be limited in accordance with the character of the examination. For an internal examination, few or even no alternative questions should be allowed; for an external one, something like 25 per cent. of the total questions should be alternative—in special cases perhaps more.
7. After the questions have been drafted, the wording should be carefully revised to ensure that it is both clear and unambiguous. Some questions may very well be so worded that the candidate will have to think over them, but only the marginal portion of

questions should be of this type. The main requirement is clearness, and, if necessary, a particular question or questions may be submitted to a critic for an opinion on this point.

8. Where a question is composite (*i.e.*, has sections or stages), the candidate should have the assistance of proper setting out (or "display") to enable him to follow each section or stage easily and promptly.

9. Neither the number of questions to be answered, nor the length of any particular question, should be considerable. An average of fifteen minutes per written answer is reasonable, with sufficient additional time allowed for reading and re-reading the questions and revising, to some extent, the answers. The general aim should be to make the examination and its conditions efficient.

10. The instructions should be few and limited to essentials. It is a sign of incapacity to specify instructions which take several minutes to read and perhaps require the candidate to refer to them a number of times during the working of his answers. In general, the instructions should be merely an indication of the number of questions to be answered and the time allowed. Any "working" instructions of a particular character are best incorporated in the question to which they refer—the candidate is less likely to disregard them and thus defeat their intention, whilst the candidate who makes choice of other questions is not burdened with irrelative considerations. Nothing but the most general matters should ever be incorporated in so-called "Regulations to be read out to candidates." If anything in those regulations has to be observed in the actual working of questions, it is misplaced—it should be on the examination paper. As a standing rule, all candidates' "regulations" should be avoided. In short, it is the candidate's business to show his knowledge and skill, and it is the examiner's duty to facilitate this.

In assessing worked papers, the examiner should be quite clear upon his functions, and methodical in his procedure. His main function is to decide whether candidates have shown the required capacity according to the character of the awards to be given. Much ado is sometimes made—particularly by the supporters of internal examinations—of the "marginal," or "border-line," cases. These are really matters upon which the

**Marking
or Assessing
Worked Papers**

examiner need have few qualms. Any candidate "just scraping through" is no better (*i.e.*, more proficient) than any other candidate "just failing to scrape through," and particularly if the examiner's marks are intimated—as they should be—for both the failures and the passes.¹ As, however, the difference between a pass and a failure may have vital consequences to candidates, all border-line cases should be carefully reconsidered as soon as their character has revealed itself to the examiner, so that he can confirm his decision—whether favourable or unfavourable—whilst all the circumstances are prominently in his mind. Having done this, he should be resolute.

The following general matters of procedure may be laid down—

1. Do not form any ideas as to the proportion of candidates to be passed and failed, respectively, nor as to the proportion to be classified in the various—if more than one—pass categories. Experience does, in fact, tell an examiner what average results to expect, but, by the time he has attained such experience, the examiner is competent for his duties without other advice.

2. If the examination is a practical one, run over a number of papers (or other work, as the case may be), to gauge the general style and to ascertain the average degree of completion of the work set. Similarly, in descriptive answers, glance over a number of papers, to ascertain whether there has been an excessive demand made upon the candidates in view of the time allowed.

3. If the questions did not bear indications to the candidates as to variable value, equal values must be attached to them.

4. Read the first few papers—not necessarily the first papers of the batch—tentatively (*i.e.*, with a view to forming a clear conception of the sufficiency, or otherwise, of the wording of the questions and of the general or typical character of the answers). This will put you on solid ground and lead to uniformity of standard on your part. Incidentally, many remarkable circumstances reveal themselves in examining a large batch of papers, especially when derived from a wide area.

¹ The efficiency of many examination results is seriously impaired by the characteristically English method of hugger-mugger, as though the examiner or the system could not stand to its guns after having made its decisions. The only valid excuse for non-publication is in those cases where the necessary privacy for the candidate's protection cannot be secured, and then arrangements should be made for personal communication under reasonable safeguards.

5. Be patient. Marking examination papers is the most tedious work anyone can have to perform, and impatience is an absolutely inexcusable trait in an examiner: it is, in fact, an indication of incompetency.

6. Similarly, do not continue to mark after reaching the stage of weariness, unless, of course, you have no choice.

7. Assess marks at once after each answer is read. In assessing marks—

(a) Award full marks for a comprehensive and correct answer. Comprehensiveness in an answer is not synonymous with exhaustion of the subject matter. Candidates will furnish excellent answers, differing in remarkable ways, yet all entitled to full marks.

(b) Do not take chagrin or annoyance at one bad answer, even if it has given you a good deal of trouble, or you unconsciously give yourself a bias against a succeeding answer (*i.e.*, mark each answer independently of preceding and succeeding ones).

(c) No marks can be assigned to an irrelative answer, or to the irrelevant portions of an answer, however good.

(d) Similarly, no marks can be allowed for omitted answers, however excellently those attempted may have been executed.

(e) Unless requisite, no marks can be deducted for misspellings, bad English, poor writing, and the like. Provided the answers are legible and the meaning clear, the rest is no concern of the examiner. In commercial subjects, these considerations are always important, but even here the examiner may not be justified in deducting marks. On these points, the syllabus and other conditions, and even special instructions, will guide the examiner.

(f) Use small units. It is generally better to mark first on a basis of ten, for example, and multiply up, than to try to mark on a basis of twenty-five. Similarly, odd values of marks are to be avoided, for they are not only traps for the examiner, but the mind does not readily adjust itself to a varying standard.

8. Total the marks carefully, and check your total as carefully. Conscientiousness in this respect is essential.

9. Similarly, transfer candidates' examination numbers (if any) and the mark totals carefully to the examination schedules, and again check them.

10. Mark all errors clearly and carefully. The answers, of course, are not to be corrected as they would be for homework, but the nature of the errors must be clearly indicated by appropriate remarks, however brief, or by other indications, so that, on re-examination, or examination by another person, the faults are clearly comprehensible.

11. If a report upon the work is to be furnished, make preparatory notes as you examine the papers. These are much better than the vague, general impressions which remain after the work has been completed, whilst the process of noting also serves to give more accuracy to conclusions and observations, and conduces to numerical or other accuracy in the matters thus noted.

12. Whether required or not, totals of papers, of passes and failures, and of classifications, with the corresponding percentages, should be made after marking is completed and the schedules entered up.

In addition to examinations proper, periodical tests, such as term examinations, may be given. In continuation teaching, with its serious limitations of time, it is very

Periodical Tests questionable whether it is wise to give any such tests at all. Bearing in mind the important part which homework takes in the course of instruction, it should be carefully considered whether this will not suffice as an instrument for the purpose desired. That some students will not, or do not, perform the homework set, and that, hence, only an examination test will reveal their position, is not a sufficient argument. It may be assumed that, in general, these people do *not* know their work, and that an examination test, in their cases, is practically a waste of time. For what it is worth, however, it may be admitted that continuation students in particular will benefit by the training and experience which the working of an occasional examination test yields; and this admission, coupled with the little time available, may, perhaps, justify a trial or test examination some little time before the final sessional examination. Let it always be remembered, however, that the regular student who also does the set homework, is in *least* need of these tests, and that the others are necessarily, more or less foredoomed. If the consideration involves a question of giving or losing a necessary lesson, then the lesson should be given, and the examination test discarded.

This is a matter that only too readily lends itself to abuse. That the students should *see* one or two recent examination papers is desirable, since an important record is formed **Working** by the sessional examination results; but the **Past Examination** practice—only too prevalent in some forms of **Tests** instruction, particularly in book-keeping—of setting a large number of such papers, is vicious. Under suitable conditions, past examination questions may to some extent be incorporated in the homework, or even in a class exercise, but to make the working of examination tests anything approaching a “feature” of the instruction, is absolutely bad. When the student reaches the stage of being able to work examination papers on the subject of his course, he is ready for promotion to the next stage, and should move up: otherwise, he is educationally “marking time.”

CHAPTER XVII

LESSON PREPARATION

LESSON preparation implies and necessitates work on the part of the teacher undertaken before the actual time for teaching to begin. The most important part of such preparation

**Preparation
and Forms
of Preparation**

tion needs to be done at home, but some of it may also be performed at the institution prior to the assembly of the class. Home preparation involves such matters as the planning of work to be done, the making of notes upon the lesson subject of a more or less elaborate character, and a certain amount of general forethought. This is always necessary in order to ensure that each and every lesson shall proceed smoothly upon the precise lines that will make the teaching most effective, and which will prevent a waste of class time that is bound to occur otherwise. Preparation to be made at the institution is chiefly concerned with the provision of materials and the collection and arrangement of any apparatus which will be required during any particular lesson. Both this and home preparation involve a sacrifice of what the teacher may regard as his private time. Whether he does regard this as an intrusion upon his private time, or resents it as work and energy not paid for, is a matter for the individual; it is sufficient here to claim that it is essential, and that the teacher's duties cannot be satisfactorily—probably not even honestly—performed unless such preparation is regularly and consistently rendered. It is not easily conceivable how such work can be measured so as to assess its monetary value directly—so much depends upon the subject, the state of the teacher's knowledge, the time at the teacher's disposal, the character of the pupils, and many other factors, that it is the prevailing custom to regard the teacher's "teaching remuneration" as covering all the work which he requires to perform. The time for raising financial questions is on appointment, or renewal of appointment, and, once installed in office, the time for stipulations has passed, and any necessary amelioration of working conditions must be obtained by representations made to the head of the institution.

A teacher who knows his subject should be able to give an impromptu lesson upon any part of it at any time. Rising to the occasion on an emergency, it may very well be that a teacher will give a particularly interesting and effective lesson, but it is more than likely that the lesson will cost more mental and exhausting effort than it should do, that it will be out of sequence with the past work and the work to follow, that any brilliance or attractiveness will largely be due to its "fireworks" character, that it will be discursive, lacking in cohesion, disjointed, and inconclusive, and that it will be nothing more than what it really is—a makeshift and a make-believe. In short, spontaneity is not a teaching qualification or recommendation, although *resourcefulness* is an invaluable asset. And just as the best impromptu speaking is that which has been carefully thought out beforehand, so the best teaching is that born of due consideration and preparation. For what is the result of adequate preparation? It results in—

**Necessity
and Value**

1. Confidence and decision in teaching (*i.e.*, effective delivery).
2. Clear, orderly, and logical development of the subject matter (*i.e.*, effective presentation).
3. Smoothness in the working out of the lesson (*i.e.*, effective machinery or organisation—everything in its place and ready).
4. Due proportion between the various heads and sections of the lesson subject (*i.e.*, effective planning).
5. Maximum work for the lesson period (*i.e.*, effective use of time).
6. Interest, understanding, and satisfaction of the students (*i.e.*, effective instruction).
7. Personal satisfaction of the teacher (*i.e.*, duty well done).

And, conversely, the lack of preparation is the negation of every one of the advantages enumerated—ineffective delivery, bad presentation, friction in the working machinery, aimlessness and side-tracking, waste of time, dissatisfaction or disgust of the students, and self-condemnation by "the still, small voice."

In preparing for a lesson, the first consideration is to decide upon the "text" or subject. Normally, this will be that next in sequence in the syllabus, but not necessarily.

**Selecting the
Lesson-subject**

The guiding consideration is: "What was the last lesson about, and what were its results?"

It may be that the crux of it turned upon some unexpected aspect,

which pointed to the necessity for a prompt or early lesson in anticipation of the syllabus or in elaboration of a past subject, or to supply certain ground-work that is lacking, but which had been assumed to exist; or it may be the lesson was left incomplete. Any of these circumstances point directly to the lesson which should follow, and the question merely resolves itself into a consideration of whether syllabus sequence should be followed, or whether the obviously desirable lesson should be given.

It is a golden rule to make each lesson an entity—one lesson, one subject. Students cannot detach themselves from one subject

**One Lesson,
One Subject**

and switch off immediately on to another. They may have failed to understand some point in the lesson, but they will still follow carefully and readily so long as the topic is under discussion—light may come at any moment, and expectation is alive. Change the subject matter, however, and then opportunity vanishes and the door closes. After that it is more than likely that the student, who may have failed to understand, will be pre-occupied, disappointed, or discouraged; and, in any event, he is not in a fit state to tackle anything new. And even if nothing untowards has occurred, there will still exist amongst students a natural aversion or friction against an attempt to start upon a second subject. Whilst, therefore, it is not always possible to make a particular subject fit in exactly with a lesson period, composite subjects are to be avoided, and, if there is time to spare, it should be devoted to exercise matter, practice, or other wise diversion that will both effect a useful purpose and yield a satisfaction to the students: at the worst, the lessons might close a few minutes earlier.

The converse—one subject, one lesson—is by no means true. A subject may quite well extend to a second or third lesson, but

**But not always
the Converse**

in that event the same principle applies as before—one lesson, one entity, and that entity is then a definite, self-contained *stage* of the subject matter. It is metaphorical murder to stop a lesson inconclusively (*i.e.*, neither here nor there). The lesson is dead unless it has been clinched, for it will have to be re-traversed in a considerable degree at the next class meeting if the treatment of the subject is to be really effective.

The lesson subject having been decided upon, it is then necessary

to collect up all the available matter and to select those portions which are to be dealt with. Manifestly, the nature of the subject

**Selecting
the Matter**

will largely affect the character and amount of the matter available for any particular lesson.

Thus, there is a very great difference between the material for a lesson in arithmetic or shorthand and one in commerce or in economics. In the former cases, the chief considerations in preparation centre round method and illustration; in the latter cases, round matter and method. The general principle, however, applies—that whatever the nature of the lesson, the available matter must be collected and that to be used in the lesson sifted out from the mass; no lesson can really be exhaustive, and to attempt to make it so, or the misconception that it can be so, will result in its delivery being flat and pointless—it will lack vim and clear objectiveness.

In collecting the lesson matter, it is important to realise the full value of specific preparation for every lesson. When a lesson or

**Sources of
Lesson Matter**

course of lessons has once been given, there is a strong tendency to regard the scope and contents of that particular lesson as fixed and crystallised

in the notes or memoranda previously made. There is no greater fallacy. That way lies stagnation, “ruttness,” and probably retrogression, for lesson notes do not record the measure of effectiveness attained in the actual presentation nor the illuminating points upon matter and method that always arise when paper ideas are actually worked out.

Hence, whilst previous lesson notes have their value, and are not to be jettisoned after use, that value is only to be regarded as a commencing basis for something better next time.

**(a) Previous
Lesson Material**

Even the most elementary lesson can be improved upon, not only the *next* time of delivery, *but at every re-delivery*. It is, in fact, the elementary lesson, above all others, that needs the most careful preparation and revision: advanced students may themselves make up for shortcomings in the teaching, but not elementary students—they have not the knowledge, capacity, or even interest to do this.

Taking, then, if they exist, former lesson notes as an initial basis for defining the subject matter, complementary means of extending the available material are next to be considered.

In the more academic subjects, text-books and works of reference are particularly the natural sources of lecture material. The

plural number is used advisedly, because no
 (b) **Books** progressive teaching can be based on a single text-book or authority, however good. A teacher should regard it as an essential part of his equipment and qualifications to accumulate the literature of each of the subjects he is called upon to teach. He may often, in the first instance, avail of the readiness of publishers to send copies of text-books for inspection during a limited period, and in this way he can distribute his purchases more judiciously, for it is remarkable how much this method assists judicious selection; of course, if specimen copies can be obtained, so much the better for the teacher's pocket. This accumulation of books is not only good for the teacher's reference, however; it keeps him in touch with progress and enables him to make improved changes of class text-books from time to time. Considered in another aspect, it means that, in practice, the teacher will always be a student—as he undoubtedly should.

In the more technical subjects, other sources of material are also available. In particular, trade papers, institution and society

journals, manufacturers' lists, circulars, and the like, papers read at meetings, original documents, official publications, commercial magazines, and many other sources of a like nature, all give up-to-date, practical matter, that at times is quite invaluable. The teacher should develop an omnivorous appetite for such literature, and maintain his appetite in a constant state of insatiable hunger. If there is a public library in the district, the commercial teacher should make a practice of glancing over the index pages of all trade papers that lie on the tables, or are in the racks, and valuable finds will reward him from time to time, even from the unlikeliest quarters.

The teacher should keep cuttings files, and accumulate in this way articles, facts, references, and other matter which may be

worth hoarding for possible future use or sugges-
 (d) **Accumulated Literature** tion. A mountain of matter can be accumulated in this way, and when properly indexed—with, perhaps, a periodical weeding out of stale material—much matter

of a more or less permanent kind becomes available as really helpful lecture material.

The teacher's personal research and thought may also be added to the sources of new material. There must always come a stage

**(e) Personal
Material**

when, if he is really interested in his subjects, and is constantly progressive, the teacher will himself produce new ideas. Sometimes these will be of the nature of contributions to thought and knowledge, and at other times they will be ingenious, novel, or striking manipulations of old facts and ideas. In this way, the teacher may find a substantial source of new or diversified lecture material.

The subject matter being collected and sifted, it must next be arranged for presentation. This is a still more important process

**When Selected,
the Matter
must take Form**

than the preceding, and largely makes or mars the success of the lesson. The one guiding idea is to have a definite object—a theme to be worked out to a due conclusion, a process to be acquired, something to be proved, a body of knowledge to be built up—and then to arrange the whole of the matter so that the delivery of the lesson becomes a cumulative and converging process, concluding naturally and effectively in the attainment of the object sought. With such a definitive purpose marked out, and all the constituent details of its development considered and arranged with the one object in view, no lesson can be without point or without a definite measure of success. There is, perhaps, one danger which is always lurking in the teacher's path, however, and which needs to be guarded against during the actual delivery of the lesson, and that is, the danger of side-tracking. Incidents will often arise which present strong or plausible cases for a divergence from the direct purpose of the lesson—it may be to answer an interesting point that has unexpectedly cropped up, it may be to elaborate upon a section of the matter which appears not to have been duly proportioned, etc.—and it needs watchfulness and resolution not to be carried too far from the course marked out. It is not suggested that the scheduled order of procedure or development shall not be modified during lesson delivery. To do so would be to claim that a theoretical or pre-arranged scheme is concentrated wisdom, and that adaptation to practical emergencies or requirements is wrong. What is meant is, that side issues raised and

followed in a lesson are undesigned, are outside the charted course, and, like will-o'-the-wisps, they almost certainly lead to a morass, in which the teacher and the lesson are in danger of becoming lost. Side-tracking is lesson murder.

In arranging the lesson plan, a further important consideration arises. It is easy to find, in many subjects, an established order of development, a customary point of view, or

And Personality a more or less fixity of procedure. Particularly is this so in text-books. It requires much originality and a large command over a subject in order to break away from tradition and to take a new outlook. Traditional routine may well be based upon a common recognition of certain accepted lines of development which expose fundamental truths and principles, and, in so far as that is so, it behoves the teacher to give the established procedure due consideration. But, outside all this, there is one great fact that should be borne in mind in all teaching—the fact that no teacher can teach if he is merely playing the part of a gramophone disc and simply reproducing mechanically what he has himself absorbed or prepared. There is no room in teaching for the automaton, and unless the teacher plans and works out his lessons so as to present the stale, the old, the trite, the fossilised, the tedious, the intricate, or the obscure, in a fresh and interesting light, he falls short of the functions of his high office. To achieve success, his plans must be original—in other words, they must be characteristic of the teacher, reflecting his personality and thus be living and real. Just as the opening moves of chess, and the attack and defence developed during the game, are indicative of the respective players, so the delivery of a lesson should be free from routine, fresh and original, and worked out as the strength and skill of the individual, given full scope, can best effect.

The collection and sifting out of the lesson matter, and the planning of the lesson for maximum efficiency in method and delivery, are two distinct and separate problems.

**Matter
and Method
two Separate
Problems**

In normal cases, no great difficulty arises, and the one requirement effected, consideration can be forthwith given to the other. In difficult lessons, however, and in those in which the teacher has had to make an exceptional amount of matter preparation, it is quite inadvisable to settle upon both matter and method concurrently. Consideration,

thought, and even digestion of the matter prepared, may be requisite before an effective method of delivery can be devised. In these cases, the earlier the lesson matter can be prepared, the more mature will the subsequent plans and arrangements be. This detached deliberation constitutes one of the best training systems in teaching method, and it is out of such occasions that the teacher develops originality and skill. So long as the single problem of method remains the only detail of lesson preparation to be completed, it will almost unconsciously recur to the mind time and again until an effective plan is evolved.

The form the lesson notes should take, and the detail of both matter and method which should be written out, are matters for the individual to decide. The newer the subject

Lesson Notes to the teacher, the less his teaching experience, or the greater the amount of preparation it is necessary for him to make, the fuller and more detailed should be his lesson notes. The "half sheet of note-paper" upon which a celebrated politician was supposed to prepare even the most responsible speech or address, is not to be regarded as the model for a teacher's lesson notes. At the same time, the set form so frequently illustrated in books on teaching method is not to be taken as a much better model. Rather should the form and detail of the lesson notes reflect the views and requirements of the individual. The following points are those which are most to be considered, and which will more or less find expression—

1. A general conspectus of the subject matter set out in leading sections, each marking a distinct step or stage towards the final object.

2. The lines of development of each of the leading sections, perhaps best shown by sub-divisions of each main head.

3. The exact terms of special matter, such as definitions, statistics, quotations, and diagrams.

4. Memoranda of the method to be followed, particularly when it is detailed or involved, and may consequently be forgotten, or may need a glance for guidance during the actual lesson. Such memoranda will often be best made in a short summary paragraph, succinctly expressed, and separated from the subject matter.

5. Memoranda of the materials required, when they involve preparation, so that they shall all be ready before the lesson begins.

EXAMPLES—

BUSINESS METHODS I.—LECTURE XXII

Session 19 -19

Subject: "Rendering Accounts"

I. KINDS OF ACCOUNTS.

1. *Invoice*—goods sold; *bill*—services rendered. Also: *Invoice*—wholesale trade and commercial. *Bill*—retail trade.
2. *Statement*—of account during a given period.
3. *Account Current*—bank, and import and export trade.
4. *Debit and Credit Notes*. (2-4 next lesson.)

II. INVOICING.

1. *Kinds*—general or ordinary; *pro formâ* (*cf.*, *pro tempore*; *pro tanto*; *pro aris et focis*; *pro bono publico*; *pro Deo et Ecclesia*; *pro patria*; *pro rata*; *pro rege, lege, grege*).

2. *Function of General Invoice*. Presents all relative facts respecting a sale of goods—technical description, etc.; records completion of the contract to sell on seller's part; enables payment to be passed; basis of Bought or Purchases Book.

3. *Function of pro formâ Invoice*. Guides agent when consignment sent to him; gives full details of cost of goods in reply to an enquiry; sent at times to new customer in lieu of granting him credit.

4. *Forms of Invoices and Bills*.

(a) Reference to ordinary retail bills, to bills for work done, to bills for services—doctor's, solicitor's "bill of costs."

(b) *Invoice particulars*—essentials.

(c) *Invoice rulings*—purposes, variations, general ruling, value of double cash columns illustrated.

(d) *Invoice terms re quantities*. Gross weight, net weight, tare, draft, "damages" in piece goods. Actual and average tare. Ullage.

(e) *Illustrations of special forms* showing such technicalities as in coal invoice, tea or coffee wholesale invoice, invoice for piece goods, paint and colours, etc.; e.g.—

(i)	270	1	2	18	3/2
	271	1	2	16	
		3	1	6	
				10	
		3	0	8 @ 76/-	etc.
				Less 1%	
(ii)	2/59, 1/60, 3/60½, 3/60½				
					etc., etc.

(f) *Expressing quantities*—5 gr.; 3 doz.; 1 only; ¼ hose. Special ruling aids for quantities in left (description) column, for sizes as in boot trade, etc.

(g) *Invoice memos*: "Per L. & N. W. goods to-day"; note of weight—

	NET.	GROSS.	MEASUREMENT.	
141 lb.	3	1	20	28 × 42 (barrels)
183 "	3	2	0	48 × 42
				(The like for "cases.")

"One case sent to office country packed"; "mark stores"; etc.

(h) *Checking invoices*—with order, with deliveries, for extensions.

III. HOMEWORK.

Exercises from typed sheet. Double cash columns.

Date _____

TYPEWRITING I.—LECTURE X

Session 19 -19

Subject: "Typist's Corrections"

I. TYPICAL ERRORS WHICH OCCUR.

1. *Omissions in Copying.*

(a) Causes: Carelessness; not using a place indicator on the copy; moving the place indicator too far to save frequent moving; recurrence of some word or phrase and jumping the intervening matter.

(b) Illustration of copyholder and its use. Requirements of a good copyholder and its limitations.

(c) Manipulation of ruler, post card, etc., as position indicator when copy laid flat.

(d) Ease with which omissions occur when the matter copied lacks context (e.g., figures).

2. *Interpolations.*

(a) Definition.

(b) Causes: Mental, as when some common form of expression rendered in its ordinary form in the typing, is differently expressed in the manuscript; carelessness, when there is no apparent reason otherwise continuing at wrong place in manuscript.

3. *Incorrect Characters.*

(a) Kinds of errors: Inversions as "teh" for "the"; entirely wrong characters; obviously caused incorrections; errors of spelling.

(b) Causes: Inversions may be mechanical, especially when the same form is repeated; otherwise they are probably mental, the mind outrunning the hand. Wrong characters are usually due to bad fingering. Obvious errors arise from keyboard characters immediately above or below appearing, oftenest lower characters through the fingers being too flat; other cases are such as the use of the finger for the space-bar, bad use of shift key, and having a shift key only on one side of the keyboard.

II. AVOIDANCE OF ERRORS.

Good methods of manipulation; concentration on matter copied instead of on keyboard; training; personality.

III. CONSEQUENCES OF ERRORS.

1. May involve re-typing.

2. May necessitate the error being struck out and left to mar the work.

3. May admit of erasure.

4. May cause the document typed to be discredited, especially when figures are involved.

IV. ERASING. (Discuss and demonstrate.)

1. Admissible—normally.

2. Avoidable—occasionally when a minor interlineation may be made in a document which does not admit of erasure.

3. Method of erasing—

(i) Materials. Discussion of erasers and eraser "shields" and of substitution for the latter.

(ii) Full and partial erasures and study of effects of "strikes over."

(iii) Methods of procedure.

(iv) Methods of inserting the corrections.

(v) Correcting figures,

V. HOME AND PRACTICAL WORK.

Written keyboard location exercise. Character position of following sentences to be indicated—

Unquestionably prevention of error is better than cure.

A position indicator on the copy is necessary.

The indicator should only be moved short distances at a time.

Bad fingering is the most fruitful source of error.

An erasure is generally the confession of a culpable fault; otherwise it is a sign of incapacity.

Occasionally an erasure may be partial: usually it must be complete.

Typing—

Exer. 23, omitting last six lines.

Any spare time to be given to typing the alphabet on a separate sheet of paper, using 25° margin, no spacing between letters, and alternately typing all smalls and all caps.

Materials memo. Copyholders—fixed and movable; eraser shield; post card or envelope; round and oblong erasers.

ARITHMETIC I.—LESSON V

Session 19 -19

Subject: "Introduction to Decimals"

I. THE DECIMAL PRINCIPLE DEDUCED FROM THE SIMPLE THEORY OF NUMBER.

1. Preliminary terms.

(a) Number is indicated by brief *symbols*, 1, 2-9; and since early calculations were done on the fingers, these *simple numbers* have been called "digits," from the Latin *digitus* (a finger).

(b) Whatever the origin of the *Arabic numerals*, they are to all intents and purposes "*arbitrary*" symbols.

(c) Each symbol has *simple* or *nominal* value.

(d) Used without reference to any *denomination* numbers, are *abstract*; used with respect to a denomination, they are *concrete*.

(e) Examples of concrete numbers—4 books, 4 animals.

(f) Examples of abstract numbers—4, 40, 4 dozen, 4 score, 4 hundred, 4 gross, 4 cwt. Usually dozens, scores, cwts., etc., refer to particular *things*, as 4 dozen books, 4 cwts. coal, and so are seldom thought of in the abstract. When we speak of abstract number only, we speak of "*pure*" number—number apart from things.

2. Numeration.

(a) If there were no "system" in the nomenclature of number, we should require a separate and distinct word for *every number* just as we have for the digits. This would make "numeration" or the naming of numbers such a burdensome matter that only a few numbers could be remembered. (Illustrate by the power of aborigines, such as of Australia, who only counted up to three or four.)

(b) Hence a simple system of names is essential. We have this in the numeration of quantities above nine. (Examine the numeration.)

3. Notation.

(a) Similarly a simple method of *writing* number is essential.

(b) Simplicity is obtained by using the simple symbols and giving them a *position* value as well as a *name* or *nominal* or *simple* value. (Illustrate.)

(c) Hence the names "tens," "hundreds," "thousands," and "millions" are *position value names*. The simple digits written down are called "units." "Tens" may be regarded as "handfuls" of counting, so that 4 tens or $40 = 4$ handfuls or countings of the digits (fingers).

(d) The relation of a unit to the position of the same symbol in the tens is said to be a relationship of tens or tenths; or, using the proper term, is a *decimal* relation from the Latin *decem*, ten. Analyse position or decimal relationship in detail with various numbers, finally testing whether the analysis is properly understood by using the following headings and requiring single figures to be correctly inserted as directed.

M.	H.	T.		H.	T.	U.
	TH.	TH.	TH.			
Thus: Place a digit which shall be one-tenth of ten; do. do. of ten thousand; do. do. of a million.						
Place a digit which shall be ten times 4 tens; do. do. four hundred thousand; etc.						

Write the number three hundred and forty-seven. Re-write its digits twice in succession, making the position value of each digit ten times what it was at the previous time of writing.

II. DECIMAL NUMERATION AND DECIMAL NOTATION.

1. Decimal numeration: one-tenth, two-tenths, one-hundredth, two-hundredths, one-thousandth, two-thousandths, one-ten-thousandth, two-ten-thousandths, one-hundred-thousandth, two-hundred-thousandths, one-millionth, two-millionths, etc.

2. For the purposes of notation, the symbolic forms are used—

.1,	.01,	.001,	.0001,	.00001,	etc.
.2,	.02,	.002,	.0002,	.00002,	etc.

(For exercise, students to write other decimals [*e.g.*, three-thousandths].

Extend until the repetition has thoroughly familiarised the numeration and the notation.)

3. Extension of notation to more complex cases (*e.g.*, write down .13 and have it read both as "one-tenth three-hundredths" and "thirteen-hundredths"; .013 similarly; so .0013, etc.)

III. SIMPLE EXAMINATION OF THE FOUR RULES APPLIED TO DECIMALS.

These to be worked out on the same analytical lines; *e.g.*—

Add three-tenths and four-tenths; subtract five-tenths from the result; halve this result; now make it six times; etc.

Add three-thousandths and four-thousandths; subtract five-thousandths; halve the result; now make it six times; etc.

And so on until the simple operations are conceived and worked with facility.

The objects in preparing the working materials for lessons are: economy of class or teaching time, preservation of students' interest,

and the maintenance of discipline. All are

Preparation of Working Materials

important considerations, and each, rightly considered, is sufficient to compel the teacher to make all preparation of materials a duty to be effected

before the lesson is due to begin. These materials include both those which the teacher personally requires to use during the lesson and those which the students may require to use. Where the lessons are entirely theoretical, the amount of preparation is practically nil, merely amounting to an assurance that blackboard,

etc., are duly to hand. Continuation students usually provide their own materials, but there should always be a supply of ink in the ink-wells, so that those students who wish can use it for note-taking, whilst it may at any time be necessary to require the students to work examples, etc., with pen and ink. In practical and other classes requiring working materials of kinds, these should, as far as possible, be ready to hand. On the commercial side, typewriting practice and typewriting lectures and demonstrations require materials to be prepared, and it is a question of organisation and storage as to how far the machines, etc., can be ready for work when the classes commence. If carrying of machines is involved, then certainly this should be left to the students to do, if they cannot be placed ready by the caretaker or other official; and, similarly, the students should return the machines afterwards. This makes for orderliness and responsibility in a subject which is sufficiently costly in materials for care and economy to be rigidly inculcated, quite apart from any question as to whether or not it may be dignified in the teacher to get out and return a number of typewriters.

The preparation of working materials is, however, not to be confined to their merely being to hand. They should also be in a proper state for immediate use. In demonstrations, there may sometimes be value in the apparatus being in its normal state of storage, and, hence, requiring the preparation for use to be made in front of the class. Thus, a demonstration on the duplicator may properly—if not even necessarily—be begun by the apparatus being opened and made ready for use just from the state in which it is found when it is certain that it was properly and completely put away on the occasion of its last use. The limit of preparation would then be a cursory examination beforehand and the due provision of paper, and any other supplementary materials required for the demonstration. Where no advantage is to be gained by *not* having apparatus and materials out and ready, then they should be fully prepared beforehand. Included in this necessary preparation are periodical examinations of all working materials, such as the machines and their accessories in the typewriting room, and any illustrative or experimental materials required in any other subject.

CHAPTER XVIII

THE TEACHER AND HIS INTERESTS

FOR the second time in this book, it is pointed out that the finest characteristic of all education is "catholicity." Snobbery as little consorts with the spirit and refining nobility **Once again, "Catholicity"** which attends the true acquisition of knowledge as does honour with the Hun. The two are incompatible. Catholicity—one practical expression of the altruistic nobility of human nature—is the counterpart in education that "charity" is amongst "spiritual gifts," and without it, education comes to naught. There are three fields in educational work where this characteristic stands out most magnificently—first and foremost, in the public elementary schools of this country, where class distinctions count not, where charity abounds, and not even the "religious" question exists when the politician and the sectarian leave the field free to the cultivators; secondly, the field of technical and continuation education, wherein the products of all grades of education assemble and associate, each individual standing on his own personal merit, hailed and welcomed, whether apprentice or peer, if only he comes to learn; and thirdly, in the noble field of professional organisation conducted by the Teachers' Registration Council, wherein co-operate the elementary teacher, the continuation teacher, the secondary teacher, and the university don, this co-operation constituting a democracy finer than the most democratic legislature, because created and bound together by one intangible bond of mutual respect and purpose.

The student of Industrial History, brushing aside the errors and misconceptions inevitable to an early professional organisation, and its sometimes sordid manifestations in practice, sees in the Anglo-Saxon Merchant and Craft Gild the beginning and worthy expression of English professional tradition. However motivated—and at this lapse of time unfortunately but too much mist enshrouds the facts—the outstanding features which command our esteem are that the Gild fundamentally worked and aimed at *the worthiness of the man and the worthiness of his work*. Jealously protecting him

**Professional
Traditions**

from outside competitors and from external control, it bound him to professional and personal virtue in a wonderfully altruistic spirit.

Nor does the student of Industrial History misread the manifestations of modern Trade Unionism and modern professional organisation. The appalling difficulties surmounted by the one, both within and without, and the high professional standards attained and maintained by the other, bespeak the perpetuation of the true spirit of professional organisation and tradition embodied in the early Gild.

Open as the field of technical and continuation teaching is with respect to all and every student whatsoever, it is not less a character-

**Catholicity
of Continuation
Teaching**

istic of this field that the door of entry to the teaching staff is opened equally wide. As already mentioned in the chapter on "The Continuation Teacher," "probably a more conglomerate, heterogeneous array of workers has never entered the specialised work of any profession than into that of continuation teaching." Now, the fact that this remarkable catholicity exists, and that the continuation teacher is "first and foremost almost without exception, dependent for his livelihood upon some other source of income," is naturally a menace to professional tradition. This is highly unfortunate, if the aims of professional tradition are pre-eminently *the worthiness of the man and his work*. That such are the aims, there should be none to question at this time of day, when the whole aspect of social welfare is profoundly stirred with the spirit of a new renaissance. And that such aims must continue to dominate professionalism—whatever errors it may or may not incidentally commit—needs no more demonstration than the palpable evidence that the future is marked out for a strenuous national and personal efficiency. This, as always, cuts keenest at the most responsible work and the most responsible workers, and whatever perambulations increasing pressure upon efficiency may make, it must inevitably come to its culminating point in educational training. It then rests with the profession itself whether or not it shall, collectively and individually, rise to the new level demanded of it. It can never be to the advantage of any profession to resist the demand for progress, for higher efficiency; the strongest professionalism would break down in an effort to resist, should its corporate efforts ever be so unwisely directed as to make the attempt. Professional organisation has quite a different purpose—the purpose of guiding

the pressure of demand that it may result in the requisite progress on the one hand, and the preservation of the individual on the other. And hence, with such a composite body of workers as technical and continuation teachers, the responsible work of professional organisation meets with double difficulties—the keen, direct pressure for educational progress, and the natural inertia which must tend to affect those whose teaching work is secondary to their daily avocation. Two consequences follow—first, that the pressure will become the more insistent the more inert and irresponsible the mass upon which it falls; and secondly, that professional organisation, however much individual apathy and irresponsibility it may encounter amongst individuals, must cope with the pressure and, if needs be, abandon the individual. Hence, either the individual must go with the organisation or the organisation will drop him, if not worse.

It is to the point to indicate some of the ways in which professional teaching organisations minister to the needs of their members and

**Scope
of Teachers'
Organisations**

the advancement of the profession. Perhaps it would be well first to state definitely what has already been implied in the preceding paragraph—that whatever the individual's relationship to

teaching (*i.e.*, primary, as where he depends directly upon it for his livelihood; or secondary, where his means of livelihood lie outside his teaching duties), he is a member of a profession and must co-operate with it in its aims and responsibilities. And, further, that the very heterogeneousness of the body of continuation teachers makes their professional organisation a doubly difficult matter.

The following published "objects" of the National Union of Teachers embody the principles which must guide and stimulate *any* organisation of teachers, and almost without exception they could be embodied in the objects of any organisation of continuation teachers—

- (a) To associate and unite the teachers of England and Wales.
- (b) To provide means for the co-operation of teachers and the expression of their collective opinion upon matters affecting the interests of education and the teaching profession.
- (c) To improve the condition of education in the country, and to obtain the establishment of a national system of education, co-ordinated and complete,

(d) To secure for all State-aided schools adequate financial aid from public sources, accompanied by suitable conditions.

(e) To afford to His Majesty's Government, the Board of Education, the Local Authorities for education, and other organisations—public or private—which have relation to educational affairs, the advice and experience of the associated teachers.

(f) To secure the effective representation of educational interests in Parliament.

(g) To secure the compilation of a comprehensive register of teachers.

(h) To secure the solidarity and extend the influence of the teaching profession.

(i) To secure the recognition of the teaching profession as a diploma-granting authority.

(j) To watch the administration and working of the various Education Acts, Codes, Minutes, and Directories; to endeavour to amend their terms and administration when educationally desirable; and to endeavour to secure the removal of difficulties, abuses, and obsolete regulations detrimental to progress.

(k) To maintain a high standard of qualification, to raise the status of the teaching profession, and to open to members the higher posts in the educational service of the country, including the Inspectorate of Schools.

(l) To afford advice and assistance to individual members in educational and professional matters, and in legal cases of a professional nature.

(m) To extend protection to teachers whenever necessary.

(n) To watch the administration of the Superannuation Act and the Pension Minutes, and to endeavour to secure their amendment.

(o) To promote the welfare of the Teachers' Provident Society and the Teachers' Benevolent and Orphan Fund.

The catholicity of continuation teaching is not only a potential source of weakness in the organisation of its members; it is also a serious drawback on educational grounds. The standard of any profession depends very much on the outlook of its members upon the work of their profession. If continuation teachers have no educational outlook, no scientific conception of the duties and

**The Continuation
Teacher
and Educational
Problems**

problems with which their work is faced, the standard of the profession will be low, and they will professionally never be able to exert any voice in educational matters: they will be conspicuously unworthy. It is, therefore, the duty of the continuation teacher to take a real interest in all educational problems, and, in particular, to study those most directly concerned with his own particular teaching work. It is the recognition of this that has made the author of this book present so many questions for the reader's consideration, some of which at first sight may be considered as outside the purview or requirements of the average continuation teacher. And there is one other cogent reason why the continuation teacher *must* study his art and its problems—he *cannot discharge his duties efficiently unless he does*.

Passing now from the collective interests of continuation teachers, and their individual responsibilities thereto, we come to the consideration of personal interests. It is a primary requisite for his executive duties that the teacher should himself be a confirmed student.

**The Teacher
Always a Student**

Progress in opinion and in knowledge is so rapid, so insistent, that, however specialised the subject or subjects a teacher may teach, he will find it constantly necessary to read, mark, and learn. The same fact holds good for the most routine subject of continuation instruction. In a vital respect, therefore, every teacher must be a confirmed student; his bookshelves must be the repository of as much new technical literature as he can possibly obtain, and the literature must be adequately studied. In this way the teacher becomes an authority upon his subjects. It is just here, however, that slackness may set in. The more competent the teacher's knowledge, the less attractive becomes any reading which involves a re-traversing more or less of the same beaten track. Whilst, therefore, progressive contributions to the body of knowledge upon a subject will have attraction in ratio to the individual's knowledge, normal works, representing more or less the established body of knowledge from another author's point of view, rather repel. Yet there may be freshness of view, originality, and suggestiveness in such a book that may amply repay perusal and, indeed, demand it. It is, accordingly, suggested that every new course of lessons given in a subject should be prepared *pari passu* with the reading

**(a) Of his
Special Subjects**

of a new text. The new text then at once exerts its influence on the teaching, and at the same time its reading is definite, is distributed over an adequate period of time, and is effective (*i.e.*, assimilated).

A second requisite for the teacher's discharge of his duties is that his knowledge should be as effectively comprehensive as specialised. To become lop-sided is to become a pedant, a crank, or a faddist: breadth of view is the only corrective to this real danger. The corollary is that a teacher should study all the cognate subjects which bear upon the main one. Prejudice and narrow view—synonyms for inadequate knowledge and for error—are prevented, and comprehensiveness of knowledge and breadth of view are assured. But what are the cognate subjects in any given case, are they many, and in what order should they be studied? This is a question which the young or inexperienced teacher will certainly ask. The following table is, to some extent, an answer—

<i>Teaching Subjects.</i>	<i>Cognate or Ancillary Subjects</i> (to be studied previously or concurrently).			
ACCOUNTANCY	Teaching Method	Mathematics or Higher Arithmetic	Com. Law	English
ARITHMETIC	do.	Algebra	Euclid or Practical Geometry	English
BANKING AND CURRENCY	do.	Mathematics or Higher Arith.	Com. History	Economics
BOOK-KEEPING	do.	do.	Bus. Practice	English
BUSINESS PRACTICE	do.	do.	Book-keeping	English
ENGLISH	do.	Another language	Literature	Reading aloud
GEOGRAPHY	do.	Com. Hist.	Economics	English or Physics
ECONOMICS	do.	do.	Bus. Practice	Law & Social Legislation
COM. & INDUSTRIAL HIST.	do.	Economics	Geography	Political History

<i>Teaching Subjects.</i>	<i>Cognate or Ancillary Subjects</i> (to be studied previously or concurrently).			
MODERN LANGUAGE	Teaching Method	Bus. Practice	Phonetics	English
COMMERCIAL LAW	do.	do.	English	Legislation & "Case Law"
SECRETARIAL PRACTICE	do.	do.	do.	Com. & Company Law
SHORTHAND	do.	do.	do.	Reading aloud
TH. & PRACT. OF COMMERCE	do.	English and Geography	Economics & Indus. Hist.	Book-keeping Com. Law
TYPEWRITING	do.	English	Bus. Practice	Shorthand

A more pretentious and efficient arrangement would be to presuppose as foundational all the elements of a good general education, add thereto a knowledge of teaching method, and then to aim at one of the following groups—

I. BUSINESS PRACTICE GROUP. *Subjects—*

Theory and Practice of Commerce, or Business Practice and Correspondence Shorthand Typewriting Book-keeping

II. BOOK-KEEPING AND ACCOUNTANCY GROUP. *Subjects—*

Mathematics Book-keeping Accounting and Banking
Business Practice and Correspondence Commercial Law

III. SECRETARIAL GROUP. *Subjects—*

Book-keeping Commercial Law Company Law
Business Practice and Correspondence Secretarial Practice

IV. INSURANCE GROUP. *Subjects—*

Mathematics Commercial Law Marine Insurance
Life Insurance Other Forms of Insurance
Statistical Method Economics

V. ECONOMICS GROUP. *Subjects—*

Geography Commercial and Industrial History
Commercial Law Business Practice Economics
Banking and Currency, including the Money Market and Exchange

VI. LANGUAGE GROUP. *Subjects—*

English Phonetics Latin
A Modern Language; or
Alternatively to Latin and a Modern Language, *two Modern Languages.*

In dealing with the duty of the teacher to take his part in professional organisation, the educational and professional aspects

of organisation were particularly in view. A connected interest is the question of the teacher's remuneration. Nor, despite the ideals and principles so often referred to already,

**The Labourer
is Worthy
of his Hire**

is the matter necessarily mercenary: rather is it a personal, as well as a professional, *duty*.

Remuneration must always be a prominent object in professional organisation, for it is the accepted economic valuation of the profession. Nor will the student of economics hesitate to claim that, all in all, the economic valuation is a fairly sound one, whilst its influence in moulding and expressing public opinion is profound. Two considerations stand out—first, that economic forces cannot be wisely left to work themselves out; and secondly, that passivity under inadequate financial conditions is equivalent to self-valuation—the price at which a person's worth is so often calculated.

It is generally admitted that the comparatively low remuneration of women typists is largely due to the fact that so many girls and

**A Warning
Parallel**

young women enter this field of employment for what is practically "pocket-money." Under these circumstances, and so long as the market is fairly

met by the supply, no substantial approach to the true economic wage is possible. At the moment of writing, the exceptional economic conditions produced by the great World War have somewhat obscured this fundamental truth, and it may be that, for a period, these circumstances will counteract the former unfortunate conditions. The illustration, however, is particularly pertinent. That so many continuation teachers should, however high their particular motives, stand in the relation of "pocket-money" earners to teaching is extremely unfortunate, and detrimental both to the creation of an adequate economic status and to the efforts towards professional organisation. In this aspect, it is not a question as to the sincerity and conscientiousness with which the individual discharges his duties; the menace to the status of the profession is, if anything, enhanced, since it conveys, in these cases, the impression that the true efficiency measurement has been attained. Just as the "pocket-money" women workers may be regarded by those of their comrades who depend entirely upon their clerical remuneration for a livelihood as "blacklegs," so those teachers who accept less than the economic value of their services are doing a real injury to those other members of their

profession who are most vitally interested in securing the full value of the work they perform. Let it be said, again, that the economic valuation expressed in remuneration is the most palpable and effective fact in fixing the standard of any profession, and that it is the duty of every single individual to concern himself for every other member of the profession, and to do his utmost to raise the status of himself and his comrades. In that way, the ideals and influence of the profession will be based upon a sound professional status, and will constantly rise to every advance in that professional status. The welfare of the worker is always the welfare of his work : personal well-being goes hand in hand with increased working efficiency. But the economic value of high wages is nowhere more discounted than in the remuneration of continuation teachers.

A further duty which the individual teacher owes both to himself and to his profession, is intercommunication. Isolation is the negation of personal and professional progress:

Professional Inter-communication intercommunication is the incentive. Not only, therefore, should the teacher interest himself in professional organisation to the extent of membership: he should go further and make his membership active, since the professional organisation is the obviously effective means of intercommunication with fellow teachers. No profession can be adequately organised that does not make substantial provision for the discussion of professional matters and for the social intercourse of its members. Naturally, the beginner will have some hesitation in taking such a step, lest it may involve literary or other personal contributions that he would be too diffident to make. But the fear is entirely a fallacy. If he has anything to contribute to the common stock, he will be free to choose his own time without any pressure, and if he have nothing, he will be equally welcome as a listener and learner. That he will both gain himself and assist in the general success of professional organisation is certain.

CHAPTER XIX

THE HARMONIOUS WHOLE, OR THE SO-CALLED “COURSE SYSTEM”

ONE intuitively associates the idea of “truth” with that conveyed by the word “harmony.” Derivatively, “harmony” implies nothing more than “fitting,” but even here one cannot avoid the immediate and direct inference that that which is “fitting” is also that which is *right*, and a simple extension of idea brings the mind to accept the test of harmony—the fitness of things—as synonymous with a test of their “truth.” An examination of the words which are classed as synonymous with “harmony” reveals the same implications. Thus we have *inter alia* the following: accord, agreement, conformity, consistency, consonance, unity. More striking still are some of the antonyms, as: antagonism, hostility, inconsistency, opposition, variance. Whilst, however, harmony is not a complete test of truth, it is, as the reader will remember, the first test which logic applies.

The sense of “melodious concord” is expressed in musical harmony, of “beauty of form or colour” in artistic harmony, of “aestheticism” in harmonious furnishing, of “affection” in domestic harmony, and of “general concord” in social harmony; underlying all is the implication that the realisation of the harmony desired is the realisation of that which is good, and, being good, true. What shall we say of harmony in education? Simply that, if we can attain it, we have solved the educational “problem.” But it is not a simple problem, to be disposed of by a single chain of harmonious relationships. There must be many harmonies—harmonies of classification, of organisation, of personnel, of environment, of system, and of curriculum. The administration of education endeavours to secure all these, and every harmonious relationship, whatever its kind, is so much attained towards the goal of “true” education.

The characteristic aim of all day school education is “educative”;

of all continuation education, "vocational." In the former, "mind" and all that it connotes, rules; in the latter, "matter"

is supreme. Continuation students need, and desire, that which is utilitarian; that which will directly and at once co-operate with them in earning their daily bread and in climbing the ladder of practical success in life. What, then, shall the curriculum be? In Hamlet's words, "There's the rub." Obviously, its centre and its mass must be that technical knowledge which directly aids the student to the knowledge and understanding of the technicalities of his particular vocation. But, whilst this is unquestionably the central or governing requirement, its precise definition is very difficult in any branch of continuation education, and in none is it adequate. For, as to definition, is the central requirement for an engineer the subject of Machine Construction; of the builder, Building Construction; of the grocer, Commodities; of the clerk, Commerce? Maybe, and maybe not; one cannot dogmatise. And as to adequacy. In each of the cases cited, to suggest that the particular subject referred to is a sufficient study or training is to suggest the ridiculous. So remote is Commerce from his direct requirements that it is almost the last thing the commercial student wants, almost the last thing that his work actually requires, and the latest thing that has been introduced into the commercial curriculum. In any course of technical training there is no single "subject" that is comprehensive enough for even the most modest requirements, and it is extremely difficult to specify at all what the minimum requisites are. So much seems desirable, so much seems essential, that no feasible selection of subjects, considering the whole circumstances, is entirely satisfactory. The basic idea of the "Course" is to select those subjects which are most appropriate to the particular circumstances, and to arrange and allocate them as harmoniously as possible, thereby securing the best and truest preparation for practical life.

The constituents of a harmonious curriculum depend upon the conceptions underlying it. What really is our duty, what really our object? Are we merely concerned that the tinker shall solder, the tailor stitch, the typist type, the book-keeper keep accounts, and the salesman tout? Or are we concerned that the

**The Basic Idea
of the "Course"
is a Harmonious
Curriculum**

**The Constituents
of a Harmonious
Curriculum**

workman shall know his calling in the real spirit and fullness comprehended in the old terms "craft" and "craftsman," and that each, in his calling, shall be "cunning" in the superlative degree? Or, yet again, are we concerned that each and every student shall be a cunning craftsman, a good citizen, and a happy and contented man? Surely the last is little enough as an ideal, and less is ignoble as an aim! Then our harmonious curriculum must include all that is possible of technique, all that is possible of the scientific basis of the technique, something of citizenship, some inspirations towards a higher self. Under present conditions, the last two seem, unfortunately, to be largely idyllic, and the first two, therefore, most of what is practicable.¹ Enough references, however, are made elsewhere in this book as to the high responsibilities of the teacher's office and the aims and aspirations he should cultivate, and he will indeed fail in a great opportunity if, simply because direct instruction in these non-technical aspects is not provided in the curriculum, he abate one jot of his indirect and unremitting efforts to broaden his students' mental outlook and to inspire them for the daily round, however humble their sphere.

Between the ideal and the practicable Course there are great differences. In general, the ideal number and range of subjects is far too wide, and it becomes imperative at the outset to decide very carefully what is to be adopted and what to be rejected.

**Limitations
to the
Curriculum**

The general method which commends itself in practice is to create a central composite subject of a broad and comprehensive character, which is most closely adapted to the technical character of the particular Course. Such subjects are Mining Science for a Mining Course, Engineering Science (comprising sections of such subjects as Mechanics, Heat Engines, Hydraulics, Strength of Materials and Theory of Structures) for a Mechanical Engineering

**(a) The
Requirements
of the
Central Subject**

¹ The Scotch Code of Regulations for Continuation Classes appends a Circular issued by the Education Department, in which it is stated that: "Moved thereto, doubtless, in large part by the results of recent enquiries which have engaged public attention, it (the Legislature) has singled out for mention as special objects of after-school instruction the following, viz., the maintenance and improvement of the health and physique of young people; the broadening and refining of their interests and sympathies by the influence of good literature; and the equipping them with a competent knowledge of some craft, industry, or occupation which offers a reasonable chance of

Course, Electrotechnics (including sections of such subjects as Magnetism and Electricity, Electric Power Generation and Transmission, Electric Lighting and Wiring, etc.) for an Electrical Engineering Course, and so on. Such central subject runs more or less throughout the entire Course, building up the particular technique and claiming something like one-third of the total time which the Course requires.

Round the central subject are grouped those ancillary subjects which make for the better comprehension and assimilation of the central subject, and are specially proportioned thereto, one ancillary subject stopping in favour of another so soon as its contributory purpose has been fulfilled. These ancillary subjects are largely dependent upon the special character of the students' requirements, particularly with regard to local industries and employment.¹

Remembering that continuation instruction is, first and foremost, technical in character, it follows that the adequate provision of apparatus and other means for experimental and practical work is essential. This is the most serious limitation of all upon a Course, for it requires apparatus, materials, small classes, much time, and individual oversight. So great is this difficulty in practice that valuable and expensive equipment may lie almost disused for years, whilst in the Commercial Course the inherent difficulties of defining any basic practical work, and formulating thereupon a specific and organised body of practice and experiment, present an unsolved problem and result in the presumably basic subject of the Theory and Practice of Commerce being the proverbial ton of theory with the ounce of practice.

providing a means of livelihood in adult years. . . . A narrowing of the instruction to the bare necessities of any mechanical occupation is to be avoided. . . . Accordingly, whatever latitude may be allowed to adults who are attending Continuation Classes for reasons of their own, a certain participation in this broader range of instruction should be required of all juvenile members of Continuation Classes."

¹ Quoting again from the Scotch Code: "Each group of occupations followed by young people must be closely studied with a view to discovering what sort of instruction is most suitable for those engaged in it, from the point of view not merely of present efficiency but of future potentialities. . . . That future ought not to be conceived in any narrow sense of merely technical activity; it is obvious that a wise choice of that future by individuals is of vital interest to the community as a whole."

Then, too, it must not be overlooked that all forms of modern industry—technical, art, or commercial—are necessarily so subdivided that particular individuals only require particular aspects of the trade or occupation in which they are engaged. However ideal a broad and comprehensive outlook on their special industry may be, students cannot be expected to take an interest in matters that, for all practical purposes, may be as remote from their individual cases as the moon is from the earth. Thus, we find that the collier looks askance at Mine Surveying, the pattern-maker at Practical Mathematics, and the book-keeper at Economics or Shorthand.

With wise and discriminating administration, some of these difficulties may be overcome, but where, as so often happens when the more exacting subjects are approached, the students have had insufficient general education, the wisest régime must fail, and the Course is perforce circumscribed and restricted.

Further, there is a constant friction between the exigencies of students' employment and the efforts which their Course should require from them. Distance of employment from the home and from the school, restrictions of travelling, overtime, etc., to say nothing of the actual or tacit resistance or hindrance of the employer, all combine to limit the scope and character of the work which can be attempted. Lastly, and without seeking to exhaust the list of limitations, the inexorable restrictions of time are most serious.

Students cannot reasonably be expected to follow a Course during more than three evening attendances per week (or, conversely, employers cannot reasonably be expected to liberate their employees more than a strictly limited number of hours during the working hours of the day); further, time must be allowed for necessary home study and work; and, lastly, as adolescence is approached, life presents attractions and duties incompatible with the exacting demands of close and prolonged years of study.

"The best laid schemes o' mice and men, Gang aft agley," and oftenest because of wrong or defective administration. Of

all sound educational proposals, none has suffered more in application than the so-called Course "System." The conception of continuative education as a harmonious scheme of related, essential subjects to be combined, as it were, in a series of complete mosaics—each mosaic a self-contained Course—was a conception of that potentiality which creates revolutions. And it was exactly as revolutionary that the Continuation Course was received by education authorities, by teachers, and by students. Reform always meets with a harsh reception—our study of psychological principles sufficiently accounts for the cause—and educational reform seems to be peculiarly difficult to effect, witness the most prominent of recent movements—the renewed crusade against compulsory Latin and Greek, the Registration of Teachers, the abolition of examinations in the primary school, and the introduction of the organised Course into continuation teaching.

**Administration
of the Course**

The Board of Education—the sponsors of the organised Course—erred in the first instance by attempting to transfer the risk inherent in revolutionary reform, from itself to the individual institution and the individual teacher. For years it offered the bribe of additional grants for Course schemes as opposed to the prevailing single-subject arrangements, but it failed to offer guarantees of financial security for a limited period to those who would experiment along the reform lines. From this initial blunder evolved a decision to resort to pressure and compulsion in order to achieve what had hitherto naturally failed; and resistance was provoked in place of apathy. The wheels having been set in motion, further friction resulted between the administrators and the teachers, and between the teachers and the students. Instead of the lubrication of reasonableness and elasticity, rigid courses were laid down, and, willy-nilly, every student must take the precise dose prescribed, neither more nor less. So unreasonable were the administrators that students—naturally lop-sided by having progressed in particular subjects which they had previously chosen and studied, whilst being lacking in other subjects which they had tabooed under a voluntary single-subject régime—were compelled, in order to gain admission to the school, or in order to take up other subjects which they actually desired, to recommence *ab initio* subjects in which they were already competent. The situation was not only

ludicrous; it was lunatic. And the moral is the key to the proper administration of the Continuation Course. Specifically, it may be said that the proper administration of the Course should comprise the following matters—

Waste—of effort or of material—is nowhere more to be deplored than in education and educational effort. When the individual is misdirected, marks time, or is positively debased, the injury done to him is irremediable and permanent.¹ In the precious and limited time devoted to continuation study, no student should have to scrap any previous progress. If his case is out of joint with the Course arrangements, it should remain out of joint if an adequate timetable can be arranged for him (*i.e.*, if particular classes in various “years” of the Course can be selected to meet his particular case, then selected they should be, and no other considerations should prevail against the proper educational distribution of his time and effort).

A parallel case arises when a change of teacher is effected during a session, for the whole class or classes affected are bound to suffer. Such changes frequently ring the knell of many students for at least the remainder of the particular session, and, in any case, there must almost certainly be a marking of time or an actual retrogression. The teachers on a continuation staff should have sessional appointments with obligations on both sides of the contract, and the students should have security that classes will not be suspended or closed under any but the gravest circumstances. Guarantees in this respect have results infinitely more beneficial than any financial economies that may appear to be effected by such causes as closing classes because a certain number of students do not maintain their attendance. Fortunately, under the Course organisation, much material assistance arises to maintain both numbers and classes. One subject supports attendance at others, and to delete any subject or class is to put succeeding years of the Course out of gear—a too deplorable result to be permitted, at least in the junior or earlier classes of the Course.

¹ In *Modern Views on Education*, Thistleton Marks quotes the following from an Address by Thring: “The waste in a teacher’s workshop is the lives of men.” They are words which should be branded on the mind of every teacher, young or old.

An inherent characteristic of courses is that the subjects are, perforce, selected to meet the average case. Whilst of necessity such an arrangement must effect the maximum good to the maximum number of individuals, the special cases arising, particularly where the number of students is large, present a substantial claim for full consideration. And a self-regulating organisation is the best method of dealing with them—or, better put—of ensuring that all exceptional cases shall be enrolled. Such a self-regulating system is the inclusion in each year of the Course of a number of alternative or optional subjects, and, as always, the maximum advantage of such special adjustments attaches to the earlier years where the numbers are a maximum. Whether or not such alternative or optional subjects should be a maximum possible, depends upon the nature of the Course and other circumstances. For example, there is always the central subject, with its great demand for time; and the ancillary subjects may usually be regarded as scarcely less in importance.

Arising out of the last preceding consideration is the important case of the higher classes. In the nature of things, these will have the fewest students; and alternative or optional classes still further dilute the numbers. It is of the greatest educational importance that numbers should not constitute the perspective in which such classes are seen. The students represent, in general, the very salt of a number of years of organised educational effort. They have singled themselves from the mass by sheer ability and perseverance; they are not of normal type; they are the men who are going to "get there," each in his particular degree and sphere; effort and expenditure on their behalf results in a geometric progression of assured returns. Just as the production of the one genius of a century yields greater national and human welfare than all the work of normal individuals during the same period, so the preservation of students throughout the whole Course results in inestimable advantages, both particular and general. In short, the preservation of the widest possible choice of classes in these highest years is as important as the preservation of the normal classes of these years.

There are some serious and constant tendencies inherent in the

Course organisation that claim continued and careful attention and correction. Foremost of these may be placed the unregulated

- (d) **Careful and Repeated Correction of Adverse Tendencies** imposition of home exercises and study. In cases where the same teacher takes the whole of any particular Course year, he can regulate the amount of this work with all necessary nicety; but where more than one teacher is concerned, each

naturally seeks to attain the maximum efficiency of his particular subject, and it is certain that, in the absence of real and substantial arrangements to prevent an excessive total demand, too much effort and sacrifice will be imposed upon the students. If no organisation is attempted so as to secure regulation in this respect, students will take the matter in their own hands, and will either perform the work set by the most exacting or assertive teacher, or they will do that which they conceive to be most important in their particular cases: in either event, the evil is patent.

A second serious tendency is overlapping of the instruction. It is obvious that, in the nature of things, there will be many points at which ancillary subjects will mutually impinge and will also overlap the central subject. Within degrees, there is no harm done, and there may be a balance of advantage, but the danger is real and should be guarded against by the interchange of views between the teachers concerned, and by resultant measures being taken to readjust details of the instruction. Such correction should be sufficiently frequent to ensure the maintenance of interest in all classes, and to allow of each teacher arranging his work so as to attain the most intensive results.

Thirdly, the tendency to irregularity of attendance at particular classes which students conceive to be of less direct utility to them than others, and which they may even deliberately seek to evade, needs steady watchfulness. If well-planned, the Course as a whole should, on the average, be indispensable, and where each student is enrolled after specific consideration of his particular circumstances, no question should subsequently arise as to relative utilities or necessities. Decision and firmness are rightly to be applied in these cases.

The system by which students are assessed on their session's work must be both carefully devised and wisely administered. Border line cases and definite failure in one or more subjects call

for much care before it is decided whether or not a student shall be allowed to go forward, or whether—if possible—a compromise shall be made and the student accorded

(e) **Promotion** partial promotion. The main considerations lie around such matters as the amount of class and home exercises actually performed, the relative importance of the particular subject, the possibility of later study making up for present defects, the nature and degree of the contributory factor or factors to the failure, the personality of the individual himself, and the exigencies of the time-table.

There are always some non-course elements seeking admission to particular classes, especially amongst older pupils. Exceptions should be generously made in these cases, whilst

(f) **The Non-course Element** compromise with juniors may be less freely or even rarely entertained. With the adult student, it may happen that he is one who, though late in the day, is steadfastly resolved to make up for earlier deficiencies and whose case may justify special consideration. Observation and experience, however, go to show that the special student does not usually make good. He is more irregular in attendance, does less home work and study, and easily falls away. But too frequently, he has not the status that he thinks he has, and cannot rise to the standard of the work done. However, after due consideration of his case, on presenting himself for enrolment, he should have the benefit of any doubt that may remain.

Critics of the Course "System" have maintained that it is tyrannous. In principle, it is certainly not so, and where any

The Course "System" is not justification for the criticism really exists, it is pretty certain to be found in mal-administration.

Tyrannous Examining the question without prejudice, it is apparent that it should produce that harmony—the key-note which has been expressed in the title to this chapter—which follows upon sound principles wisely applied. And, on analysis, this proves to be so, for we have—

1. *As regards the students—*

Harmonious classification (*i.e.*, each in his proper place).

Harmonious effort (*i.e.*, no misplaced energy).

Harmonious progress in subjects studied simultaneously (*i.e.*, sound development),

Harmonious attainment (*i.e.*, no lop-sidedness).

Harmonious extension (*i.e.*, new subjects are introduced when they are due.

2. *As regards other matters—*

Harmonious organisation—one subject is not over-staffed at the expense of another.

Harmonious classes—for any given Course year the compulsory classes are practically all even in size.

Harmonious expenditure—the larger average size of classes makes the lower stages compensate for the increased cost of the higher.

With so much that is demonstrably good, the only case there is to answer is whether the element of compulsion—found in requiring students to take an adequate and approved combination of subjects—is justifiable or not. There are several grounds of justification—

1. In State-supported institutions, the State—represented by its Education Department—is entitled to look at the question from the view of the best ultimate advantage of the individual and the best return to the community for its money; to do less is a dereliction of duty.

2. If the Course is devised by competent people, it will represent the best attainable scheme of training.

3. In general, neither student nor parent is competent to define in detail what is the best training, whether as regards the precise subjects of study, the order of their development, or the time and study requisite to attain success in them. The student is in the analogous position of patient, and the institution of doctor.

4. The free competition of private institutions enables any individual who insists upon, or who really needs, tutorial or other concentrated and special treatment, to obtain it; he pays the whole cost and can call the tune.

CHAPTER XX

THE COMMERCIAL COURSE

IN the past, the classes in commercial subjects were always the backbone of continuation schools, and even to-day, despite the lower grants allowed by the Board of Education to these classes, as distinguished from those in science and technology, they form a sheet anchor of both revenue and students, to a very large number of composite institutions. Fortunately, in the interests of other forms of education, the growth of technical work is rapidly reducing the disproportion between the numbers of commercial and technical students, but meanwhile it is still true that in point of magnitude the commercial students easily stand first.

The Backbone of Continuation Teaching

The commercial school or department is characterised above all by its heterogeneity. In the Regulations of the Board of Education, "Literary and Commercial" forms a definite group of subjects always so associated, the order of the names be it observed, not inadequately denoting the attitude of authority towards commercial work. However, whilst it is in such distinguished company, it may allow the cuckoo to occupy a part of the nest.

The Commercial School or Department

The heterogeneous character of the commercial school is specially seen in the character of the curriculum and the type of the students. In some important institutions, the commercial department is styled the "Department of Arts and Commerce," and in such cases it may be pretty well assumed that the work and organisation of the commercial section suffers from the control exercised over it by the arts staff, for, with all deference to these teachers, their places are not in the commercial department. In some other cases, the "Modern Languages Department" is, presumably, dissociated from the commercial, with whose students and work, nevertheless, it is most intimately connected, and without which it probably could not exist. In those cases in which the commercial department is, by title as well as by right, recognised as the vital and substantial thing that it is, the curriculum is seen in its true

heterogeneous character, for the work then ranges from technical and professional, through the more specifically commercial, to pure mathematics, language, and literature. There is the same wide diversity amongst the students, who, colloquially speaking, include the tinker, tailor, soldier, and sailor, as well as the man, woman, and adolescent of both sexes who are engaged in any and every phase of commercial life.

In consequence, the commercial department is the most difficult of all to organise. Even as regards the commercial subjects

**The most
Difficult
Department
to Organise**

proper, there is so much that is essential and so much that is desirable that something has to be omitted even from the best-arranged curriculum.

Worst of all, the difficulties are greatest where they are most undesirable—at the very beginning of the course. A further difficulty arises out of the unfortunate fact that but seldom is there an element of full-time teachers on the commercial staff. This places the organisation in the hands of the general administration of the institution—where this is of a composite character, as in technical institutions—or else in the hands of day school teachers. In either case, the organisation must more or less suffer because of the absence of adequate special knowledge of the work and its requirements. Hence appear such absurdities as typewriting with optional shorthand, French in the elementary course without English appearing in the syllabus at all, one hour per week at a foreign language, and ungraded classes in typewriting with no theoretical instruction.

What subjects should the commercial course comprise? The answer is most difficult, and is often ingeniously evaded under

**General
Considerations
Respecting the
Commercial
Course**

the guise of sectionalised courses such as a short-hand-typists' course, a book-keepers' course, an invoice clerks' course, and a general course. Root questions such as: "How far should the course be academic?"; "How far should it be utilitarian?"; "What, if any, are the essentials of commercial education for *any* type of student?"; "How far should any particular subject be carried in any individual case?"; "Is there a fixed standard of proficiency for each subject, or is proficiency an elastic term varying in particular cases?"—all appear to be unasked and unconsidered.

To answer these burked questions, let it be said—

1. The utilitarian aspect should stand first, the academic second. This is quite consistent with all that has been said as to the value and necessity of the educational aspects of continuation teaching. The pupil must not ask for bread—literally, his very means of earning his daily bread—and be given a stone, or, in other words, be told that he can qualify to earn his daily bread in five years' time but meanwhile he must submit to be "educated." The relation of the two is clear—the utilitarian study should be introduced at the very beginning, it should progress with the utmost vigour, and proficiency should be attained at the earliest possible moment; the academic should run through the whole training as a fine thread, colouring and enhancing the value of the whole fabric.

2. The essentials of commercial education for *any* student are calculations, English, accounts, business practice. So desirable as almost to be classed as essential, are shorthand and law. After these come special subjects.

3. The subjects classed as "essential" are to be carried to that stage which is broadly understood as "a good grounding." Anything further is a good investment, but is subordinate to the requirements of the particular case. In some subjects, as shorthand and typewriting, "a good grounding" has no practical value; there must be practical dexterity, not less. Hence, "proficiency" is an elastic term in the essential subjects and in some of the special subjects; it is substantially definite as meaning "practical utility" in others.

**Further
Considerations
and a
Formulation**

With these root questions asked and answered, an attempt can be made at the formulation of the commercial course. It should comprise—

Essentially.—Arithmetic, two stages; English, two stages; accounts (book-keeping), two stages; business practice, two stages.

For specialisation.—Shorthand, typewriting, and commercial law; or further book-keeping, typewriting, and commercial law; or shorthand, typewriting, foreign language, and shipping.

For higher specialisation.—Banking, accountancy, secretarial work and practice, company law, insurance, advertising, salesmanship, etc., according to the particular case.

Desirable for all.—Shorthand, commercial law, and economics.

Of the subjects for specialisation, shorthand and typewriting should commence at the very beginning of the course where they

are required to be taken by students intending to specialise in them; the remaining special subjects can be introduced later, and as the course in each particular case develops. Where not specialised, shorthand should come in at convenience, but not too late, in view of the fact that practical utility is the minimum test of efficiency. Law and economics are best placed at the end of any course, as, by their character, they demand a mature mind if they are to be adequately appreciated.

The general lines having been laid down, the crux comes in as to the ways and means by which to effect their practical working. The following points appear to give the key to the solution—

1. Stages I and II of shorthand and book-keeping should be arranged to work in harmony. These same stages should be time-tabled clear of all other specialised subjects.

2. If adequate teaching provision can be made, English and business practice should be combined. This involves a careful limitation of the amount of work prescribed in the latter, and very careful working of the syllabus.

3. Typewriting theory must be free of other subjects as far as possible, and as much choice of time should be offered for practice as can possibly be provided for.

4. The book-keeping specialists do not require to give any extra attention to this subject during the first two years, and, hence, they fall into line with other students during this period. Not to force shorthand, the intending book-keeping specialists may be given the option of this subject, and if they do not take it up, their course would comprise somewhat less time weekly than others.

5. Shorthand should take two attendances per week—both essential, so that the work can be constantly progressive.

With these arrangements, the time-table would provide for $7\frac{1}{2}$ hours of instruction per week, condensed, as far as possible, into three (evening) attendances. For example—

FIRST YEAR

<i>Subject.</i>	<i>Day.</i>	<i>Time.</i>
Arithmetic I	Monday	7 -8.15
English and Business Practice I	"	8.15-9.30
Shorthand I	Wednesday	7 -8.15
Typewriting I	"	8.15-9.30
Book-keeping I	Friday	7 -8.15
Shorthand I	"	8.15-9.30

Book-keeping students not taking shorthand would take their typewriting either on Wednesday from 7 to 8.15, or on Friday from 8.15 to 9.30. A most desirable improvement in the typewriting arrangements would be effected by making a theory lecture for all Stage I students on Friday evenings from 8.15 to 8.45, leaving three-quarters of an hour each for shorthand and typewriting practice. It is, of course, assumed that an adequate number of typewriters is available, otherwise recourse must be had to alternatives, such as limitation of the subject, supplementary arrangements, or even deletion.

SECOND YEAR

<i>Subject.</i>	<i>Day.</i>	<i>Time.</i>
Arithmetic II	Monday	8.15-9.30
English and Business Practice II	"	7 -8.15
Shorthand II	Wednesday	8.15-9.30
Typewriting II	"	7 -8.15
Book-keeping II	Friday	8.15-9.30
Shorthand II	"	7 -8.15

As in the First Year, a most desirable arrangement with respect to typewriting would be to make a theory lecture on Friday evenings from 7 to 7.30, again leaving three-quarters of an hour each for shorthand and for typewriting practice. Supplementary arrangements for further practice in typewriting would be necessary.

The weak spot in these arrangements comes in with respect to typewriting. There may not be enough machines for the students to obtain their practice without attending on a fourth evening. Such a contingency is to be deplored, but may be considerably modified by a detailed investigation. There will, for example, always be a number of out-of-course or special students, and in these cases none of them should be allowed to take typewriting practice on the evenings when full-course students are present. A further amelioration may be made by transferring full-course students residing in the immediate vicinity of the institution to another evening. Other like considerations may allow of further transfers, and, of course, all such cases would be consolidated under one or more scheduled times. The typewriting teacher should be made responsible for settling all these details at the first class

meeting. Without debating the question in this place, it should be observed that the suggested half-hour lecture in typewriting theory would be invaluable; it would redeem the reputation of this subject and would make the practical work very much more efficient.

Still considering the arrangements of the course mainly with an eye to its economical organisation, the third year is to be broadened so as to allow of all the requisite divergencies to meet the needs of students who are specialising. This involves "alternative" subjects, the selection marking out the nature of the student's specialisation in each case. The subjects to be provided for are: Business practice (now in various parts of the country in process of being changed into the theory and practice of commerce), shorthand, typewriting, book-keeping, commercial law, economics, and foreign language. The following "elastic" cases of proficiency now operate in particular cases to reduce the number of subjects and allow of others being substituted—

1. Shorthand specialists may drop book-keeping.
2. Book-keepers may drop business practice (or its equivalent, theory and practice of commerce).
3. Any students may drop typewriting for a higher arrangement of subjects. It should be noted, however, that this kills the really advanced work in this subject for the students affected.
4. Language, if taken, may, in certain cases, cut out for the time being commercial law and economics.

The time-table would then be something like the following—

THIRD YEAR

<i>Subject.</i>	<i>Day.</i>	<i>Time.</i>
Economics I	Monday	7 —8.15
Commercial Law I	"	8.15–9.30
Shorthand III	Tuesday	7 —8.15
Typewriting III	"	8.15–9.30
Business Practice III	Wednesday	7 —8.15
Book-keeping III	"	8.15–9.30
French I (1st lecture)	"	8.15–9.30
Spanish I "	"	8.15–9.30
Russian I "	"	8.15–9.30
French I (2nd lecture)	Friday	7 —8.15
Spanish I "	"	7 —8.15
Russian I "	"	7 —8.15

It will be observed that the language arrangements require two attendances per week and that they do not allow of any beginners commencing two languages simultaneously. The typewriting lecture may be arranged on the typewriting evening, and the time of closing the class may be made, say, 9.45. The question of a third stage in arithmetic may, in practice, have to be considered.

The fourth year follows largely from the arrangements made for the third year, viz.—

FOURTH YEAR

<i>Subject.</i>	<i>Day.</i>	<i>Time.</i>
Economics II	Monday	8.15–9.30
Commercial Law II	"	7 –8.15
Shorthand IV	Tuesday	8.15–9.30
Salesmanship I	"	7 –8.15
Secretarial Work I	"	7 –8.15
Advertising I	"	7 –8.15
Book-keeping IV	Wednesday	7 –8.15
French II (1st lecture)	"	7 –8.15
Spanish II "	"	7 –8.15
Russian II "	"	7 –8.15
French II (2nd lecture)	Friday	8.15–9.30
Spanish II "	"	8.15–9.30
Russian II "	"	8.15–9.30

The special subjects are again arranged with a view to limiting the choice which students may make, but it is open to students to take up the first stage of a language along with the second one of that begun in the third year.

The fifth year follows naturally from the fourth, thus—

FIFTH YEAR

<i>Subject.</i>	<i>Day.</i>	<i>Time.</i>
Company Law	Monday	7 –8.15
Insurance	"	8.15–9.30
Banking	"	8.15–9.30
Accountancy	"	8.15–9.30
Salesmanship II	Tuesday	8.15–9.30
Secretarial Work II	"	8.15–9.30
Advertising II	"	8.15–9.30
French III (1st lecture)	"	7 –8.15
Spanish III "	"	7 –8.15
Russian III "	"	7 –8.15
French III (2nd lecture)	Thursday	7 –8.15
Spanish III "	"	7 –8.15
Russian III "	"	7 –8.15

Students requiring insurance, banking, and accountancy would be engaged in these professions, and, hence, would require special arrangements being made for following on another year. These arrangements would bring forward the question of further professional subjects which it is unnecessary to consider here. The above arrangements are merely complementary to the course proper, and illustrate how the course can lead up to and become entirely absorbed in the specialised subjects which become possible in large central institutions. Hence, in place of the heading "Fifth Year," appropriate headings for specialised courses would probably be introduced.

The logical working out of the commercial course brings up an important technical point. When the region of specialised instruction is entered, the operation of the regulations of professional bodies has to be considered, and this is quite apart from the further question as to how far it comes within the province of commercial education to provide for professional requirements. The important consideration here is the intentional bar imposed by professional bodies in the form of a preliminary examination in order to limit entry into their particular professions. This preliminary examination usually requires the candidate to present himself in a number of subjects which, during school age, he can only have acquired by a secondary school education (*e.g.*, Latin, mathematics, French, science). The exemption qualifications are of the same character—a matriculation, Oxford or Cambridge Local, College of Preceptors, and the like certificate. This places a serious, if not insuperable, difficulty in the way of the average continuation student. Educationally, excellent work would be done if provision could be made for giving the requisite instruction to enable suitable students to prepare for examinations of this preliminary type, but it is scarcely possible for such students to take the commercial course and subsequently prepare for the professional preliminary. A more desirable way would be to find some kind of compromise under which certified students, who have satisfactorily completed the commercial course or a substantial portion of it, can be admitted to the professional examinations without taking the preliminary. It is useless for a particular institution to take up this matter, but it might well be taken up by the associated commercial teachers acting together in

**An Important
Technical Matter**

the interests of commercial education. Organised effort of this kind might achieve what private effort most certainly cannot accomplish. It is in directions like this that a higher commercial education must look.

Most commercial institutions and departments make provision for students of both sexes. Now, it is generally recognised that it is unnecessary—and probably undesirable—

Girls' Courses that girls should attempt the same course as boys.

In practice, they certainly do not do so, falling off after a certain stage, particularly when they have attained some proficiency in such subjects as shorthand, typewriting, and book-keeping. In their cases, an adaptation of the general course is desirable and, under the title "Lady Clerks' Course," or the like, might be separately scheduled, thereby not only making it attractive by the appearance of specialisation, but also setting up a definite and tangible objective with the possibility of duly obtaining a suitable course certificate for the work done. Without some such clearly-marked scheme, the best results cannot be got out of their readiness to undertake a certain amount of work and to do it well. Such a course as the following has been found to work—

LADY CLERKS' COURSE

<i>Subject.</i>	<i>First Year.</i>	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Arithmetic	Stage I	Stage II	—	—
English	do.	do.	—	—
Book-keeping	do.	do.	Stage III	—
Shorthand	do.	do.	do.	Stage IV
Typewriting	do.	do.	do.	—
Business Practice . .	—	do. I	do. II	—
French	—	—	do. I	do. II
Economics	—	—	—	do. I
Commercial Law . . .	—	—	—	do. I

Of course, only the better girls will attain the standard of economics and law, but there is no reason why this should not be done, and, in fact, exceptional examination successes in them have been achieved by persevering girls.

The organisation of the commercial course by the lay administrator, instead of by a commercial teacher, produces another absurdity besides those already instanced. This is the inclusion of a modern language—generally French—in the first and second years of the course.

**Fallacy or
Impossibility ?**

The argument used is a spurious educational one, viz., that the subject may have been studied at the day school, and if so, cannot, on sound educational considerations, be allowed to rust for two or three years and then resuscitated. The answer to this nonsense is conclusive—a proper course of commercial training will not allow, in the early years, of embellishments or fripperies: the amount of other work to be done is too substantial. The same plausible argument might be adduced for continuing mathematics, Latin, and science in order to allow these students to be sure, later on, of taking such examinations as the professional preliminary; and then where would be the commercial training? Obviously, only a day institution can pretend to make provision for such extensive arrangements.

The heterogeneous character of the commercial course is not confined to the aspects already mentioned. Praiseworthy efforts have

**Has the
Commercial
Course**

a Central Subject ?

been made to bring the commercial course into a symmetrical synthesis centred round a fundamental subject in conformity with the general principle of the Course "System." Formerly, without any general apprehension as such, business practice formed the central subject: recently, a more ambitious claim has been made on behalf of the theory and practice of commerce. As a scientific contribution to some practical applications of economics and economic history, the theory and practice of commerce marks a stage of progress, but it has the common weaknesses of so many central subjects, with additional defects which are peculiar to it. These include—

1. Hotch-potchiness.
2. Mutilation of the contributory subjects out of which it is compounded.
3. Unwieldiness.
4. Building on sand.
5. Side-tracking.
6. Giving a stone for bread.

Were it possible to ignore practical requirements and concentrate

on academic lines, the subject might stand as the scientific core of commercial instruction, expanding until it duly covered commercial history, commercial geography, commercial law, and economics. But even then it would leave—despite its name—almost every practical demand of business unprovided for, such as, book-keeping and accountancy, commercial arithmetic, commercial English, office routine, shorthand, typewriting, language, and all modern practical aspects of business such as advertising and salesmanship. Remembering that the first requisite of the commercial course, in common with all other forms of technical education, is the production of the craftsman, it looks very much like dropping the bone for the shadow. There is so much to do; so much that counts is lacking in the students and calling for the instructor to impart it, that meanwhile we cannot afford to pay the price for the Utopian. It is a pity that at present we do not appear to have any psychological measurement of the educative value of the work done in acquiring the immediately useful and practical. Much mental discipline and activity is required to attain proficiency in every one of the subjects just mentioned as necessary for practical business, and a skilful teacher can make them as educational as any others. Thus, at any moment, even a typewriting lesson may travel the whole gamut from Greek and Latin roots, literature, philology, and history to mechanics, technology, technique, and art. Taking things as they are, the commercial course seems better without a central subject if it is to be the theory and practice of commerce made compulsory and appropriating one-third of the course time—for that is exactly what is being attempted by those most responsible for the recent moulding of the curriculum. It is not conducive to harmonious progress to insist that heterogeneous requirements should be made to conform to a nominal pivot. Better to sectionalise at once and make English and business practice the central subject for correspondents, book-keeping for accountants, commercial geography for the shipping clerk, and so on.

To provide for children leaving the elementary school at 13 or 14, preliminary commercial courses have been instituted. These are

The Preliminary Commercial Course “continuation” courses pure and simple. Their necessity exists in the incomplete general education which obviously characterises the child at this age; and their necessity is the indication of their real

function. Nominally commercial, they must concentrate upon the educational. Presumably to make them attractive, these courses are generally marked by more than an appearance of specialisation. Both shorthand and book-keeping are but too commonly included in the curriculum, and even French finds a place. If this arrangement is a sop, it is an expensive and uneducational one. Much more useful work could be done, and probably made adequately attractive, by concentrating the instruction on confessedly educational lines, and making handwriting and simple office routine, with commercial geography and commercial history, the elements of any necessary commercial "bias." Certainly, when the preliminary commercial students are drafted to a central institution, or seriously take up real commercial study, they are not good material to absorb into the commercial course. They require all the general foundational work to be constantly and unremittingly attended to, and they are necessarily put back to the beginning in the commercial subjects which they have presumably been studying. Like compulsory military service in another way, compulsory continuation education would cut the gordian knot of the preliminary commercial course.

Recent developments of the preliminary commercial course have included proposals for combining two or more subjects into one. Instances are, arithmetic combined with book-keeping, and English combined with business practice. It is not clear how far these proposals are intended to be carried out later on, or where their number and extent is to end. The idea is a reflex of a marked tendency in the curriculum of the day school, where combined geography and history are particularly thus advocated. It would seem to be reasonable that related subjects should admit of union, and serve their purposes better in that form; the idea, however, is more plausible than sound. The main argument put forward is the economy of time, but the suggestion is surely chimerical unless—

**Composite
Subjects in the
Commercial
Course**

1. The separate subjects constantly overlap, so that the same things are frequently being done twice over; or,
2. The scope of the combined subject is less than the total of the separate subjects.

In either case the same results would be attained by a stricter definition of the scope of the separate subjects, whilst retaining all

the advantages of their distinctive characteristics. Admittedly, knowledge and education cannot be shut off in water-tight compartments, and the more comprehensive the outlook, the greater the educational efficiency that results. But arithmetic, book-keeping, English, business practice, and all other subjects which appear to admit of combination, have surely sufficient entities of their own to make separate concentration desirable and even necessary. Educational short-cuts are inherently disastrous, for they—

1. Produce scrappiness.

2. Lack the advantages of concentration which limitation furnishes.

3. Assume that the teaching will not become lop-sided by over-emphasis of one or other of the composite elements (*i.e.*, revert in principle to the separate subjects, with loss, meanwhile, to the under-emphasised aspects). For example, there is not the slightest ground for assuming that the book-keeping aspect will retain a due proportion to arithmetic.

There are certain subjects in the commercial course which distinctly tend to overlap, such as—

1. Book-keeping and business practice.

2. English and business practice.

3. Business practice and law.

4. Typewriting and business practice.

5. English and correspondence.

6. Typewriting and correspondence.

7. Greatest sinner of all—theory and practice of commerce with economics and with law.

Combinations of these misfit both teachers and students, with loss in ultimate efficiency on all counts; not least, when honestly attempted, they seriously tend to change the teaching into popular lectures. It is to be hoped that, whatever progress is made in the concentration of commercial teaching and the improvement of its methods, the price paid will not include a loss in real efficiency.

CHAPTER XXI

TRADE CLASSES

IN large industrial organisation, and in commerce generally, the functions of the productive and trade staffs and of the commercial or administrative staffs are distinct. The result is that little or no commercial, as distinguished from industrial or technical, knowledge is required from the working staffs. There are, nevertheless, some very important exceptions to this rule. Particularly is this the case with those who hold executive positions on the technical side, such as managers and certain types of foremen, as well as those who naturally combine two functions—the proprietors, partners, etc., of the businesses. Of a less responsible character, but otherwise analogous in regard to duplicate functions, are the small proprietors of retail businesses, and the managers and other responsible officials of larger concerns. These, whilst directly participating in the trade routine of their shops, are also responsible for the commercial and clerical work attendant thereupon. In other words, the tentacles of commercial knowledge and training entwine many men in industrial and trade organisation, and render a certain amount of this knowledge sufficiently necessary to be regarded as an essential requirement; many have done without it, many have “picked up,” at a greater or less cost and sacrifice, a minimum of working commercial knowledge, and many still are groping their way towards it or paying the penalty of ignorance. In this direction lies an important secondary field of commercial training which, to a certain extent, should be met by the services of the commercial teacher.

The general commercial requirements of these practical men are fairly common and clear. Leaving out of account their wide diversity of general education, these requirements may be specified as—

The General Requisites

1. *Calculations*.—This involves a certain facility of numerical manipulation, a certain amount of arithmetical knowledge to enable that manipulation to be extended to all the requirements of their

work, and a certain amount of mensuration and technical knowledge more or less particularly applicable to their respective duties.

2. *General commercial knowledge*.—These men are more or less called upon to handle responsibly certain business documents, and to transact certain ordinary matters of business routine. In the course of time they pick up an amount of vague, general knowledge which enables them to “scrape through” in this part of their duties, the scraping through, accordingly, carrying with it an unnecessary amount of worry, trepidation, and waste.

3. *Accounts*.—In the case of retailers particularly, but frequently in other cases, a certain amount of technical knowledge of accounts is requisite if they are to discharge their duties efficiently. This may, on the one hand, involve personal ability to open and keep a set of books of account; or, on the other hand, may involve little or no personal work of this kind, but demand a proper understanding of accounts so as to be able to supervise the books kept by subordinates.

4. *Business organisation and routine*.—This generally resolves itself into the application to their special work of general principles of organisation and business routine, together with special trade or technical routine, as prevailing in their own industry.

5. *Some knowledge of law*.—The extension—great and growing—of governmental interference in industry imposes upon many trades and occupations special Acts which it is incumbent upon those engaged in them to observe. In addition, there are many general Acts, including Insurance, Workmen’s Compensation, Master and Servant, the Sale of Goods, and the General Law of Contract, which require all in responsible positions to understand and observe.

6. *English and penmanship*.—The lower grades of these men particularly, need a course of instruction in English and penmanship. Such a course need only be very elementary and confined strictly to what is practical and essential.

Much of the above work is of a character which is covered by the ordinary scope of commercial teaching, and may, therefore, be said to lie within the province of the ordinary commercial teacher to perform. At present, there have practically been no independent attempts to teach this knowledge, and no “trade classes” taught by experienced and qualified men in the various

forms of industry have been organised. The happy-go-lucky methods which are, in some respects, so common in the English character and result in a certain sort of enterprise and personal confidence, are still prevalent; whilst the scattered nature of their industry often prevents any possibility of collecting a sufficient body of students of any particular type to justify the considerable expense which these trade classes entail. These circumstances, thus militating against a wide extension of particularised trade classes, emphasise the desirability of certain common grounds of commercial training being devised, and classes of a sufficiently technical or specialised character established as will enable these important needs to be met as efficiently as is consistent with the consequent expense. The ordinary arrangements for continuation instruction, however, are not suitable. The requirements of ordinary commercial students and of these trade students are quite different, whilst the age and other personal characteristics of the two types make common classes entirely incompatible. Another feature of the requirements of these special students is that, despite the general or elementary character of much of the instruction which requires to be given, it must throughout be illuminated by a mature and practical outlook and experience, as well as marked by tactful and sympathetic handling: hence, it calls for a responsible teacher. Where detailed trade requirements are essential, a special teacher is required to support the general teacher. Such an arrangement can be productive of excellent results, satisfactory both to the students and to the practical requirements of their duties.

The requirements of some of the higher positions become too technical for the ordinary commercial teacher to attempt, and in these cases it is very difficult to say what arrangements would best meet the situation. Some possible ones are—

1. Internal organisation amongst the members of particular trades or industries whereby courses of trade lectures can be given. This is now frequently done in large organisations where the number of employees admits, such as travellers, salesmen, and departmental heads and assistants. In a less organised and developed manner, trade associations and professional or semi-professional associations contribute much useful expert knowledge by the

provision and publication of special papers. The former method, however, excludes non-employees, and the latter has too manifest disadvantages.

2. Private correspondence or other similar provision. This method is very largely in vogue, but, whilst it must be admitted that it can do good work and in particular reaches needs which, owing to the individual's isolation, could not otherwise be approached, yet it exacts a heavy price for the services which it renders, whilst there is no safeguard against fraud. There is also a further grave aspect—the touting pressure put upon individuals who make enquiries and the capture of students who are unsuitable material for the instruction offered. These individuals must necessarily fall out after but feeble efforts to rise to the requirements which proper study demands; their failure is inevitable, and they have no claim for recovery of the substantial fees they pay.

3. Local correspondence and teaching services combined. It might be feasible for a combination of instruction and homework to be arranged, whereby weekly or periodical lectures could be given on special matters and organised arrangements made for properly directed home study in the interval between successive assemblies. This would put very much work upon the responsible teachers in preparing homework schemes and in marking and otherwise directing and supervising the resultant work.

4. Placing the instruction in the hands of an experienced accountant who has special knowledge of local industries and their requirements. The difficulties are obvious—such men are generally too big for the work they would have to do in teaching, and they are inexperienced in teaching under conditions which require both experience and skill.

An example in operation is to be seen in the courses promoted by the Institute of Certificated Grocers. The courses are not

**An Example
in Operation**

ideal, although time and experience will doubtless improve them; and the students vary so much in age and educational fitness that those who have the actual teaching to perform require much tact and patience. The underlying principle, however, is admirable, and the Institute is unquestionably conducting a highly necessary educational service, for which it deserves commendation and encouragement. The syllabuses drawn up by the Institute indicate the lines upon

which trade classes of this type may be arranged and conducted, and are given below. The course of training provides for three years of continued study and is now arranged for in the commercial departments of many technical institutes.

INSTITUTE OF CERTIFICATED GROCERS

EXAMINATION SYLLABUSES

First Year

1. KNOWLEDGE OF COMMODITIES: This will include two main divisions—

(a) *Groceries* (tea, coffee, cocoa, sugar, cereal goods, dried fruits, spices, manufactured and packed goods, etc., etc.). Origin and varieties; preparation for market; storage, etc.

(b) *Provisions* (bacon and hams, butter, cheese, lard, eggs, etc.). Origin and varieties; preparation for market; storage, etc.

2. KNOWLEDGE OF ENGLISH, ETC.—

Definite questions are not set under this heading, but the candidate's attention is drawn to the fact that extra marks will be awarded for correct spelling, punctuation, composition, and answering the questions in clear language and logical order.

Handwriting will be specially considered, extra marks being also awarded for neatness, legibility, and the general setting out of the answers.

3. COMMERCIAL ARITHMETIC—

Arithmetic applied to the trade, including invoicing, calculation of percentages, interest, discount, etc.

4. BOOK-KEEPING (*Elementary*)—

General principles, and the use of Day Book, Cash Book, and Ledger.

Second Year

1. KNOWLEDGE OF COMMODITIES (*Grocery and Provisions*)—

The subjects of the First Year's course to be treated more thoroughly and completely, together with a knowledge of the chemicals usually sold in the grocery trade.

2. BOOK-KEEPING (*Intermediate*)—

The keeping and proper writing-up of all books preparatory to stock-taking, and to drawing up Trading Account, Profit and Loss Account, and Balance Sheet.

3. LAWS AFFECTING THE GROCERY AND PROVISION TRADES—

Simple questions on the law regulating relations between the grocer and the public, the master and servant. The law relating to the sale of goods (conditions, warranties, etc.).

4. METHODS OF BUSINESS—

Principles of retail trading; rules of the modern shop; correspondence; salesmanship, its principles and practice; staff management.

Final or "National" Examination

1. KNOWLEDGE AND VALUATION OF COMMODITIES—

Matters generally appertaining to Groceries and Provisions, identification and valuation of specimen commodities displayed in the examination room.

Terms, customs, carriage. Estimation of selling price in relation to total cost.

2. BOOK-KEEPING (*Advanced*)—

The Private Ledger, Impersonal Accounts, Branch Shop Accounts, Depreciation.

3. LAWS AFFECTING THE TRADE—

The Foods and Drugs Act. The Weights and Measures Acts. Law relating to the carriage of goods. Method of holding property, and the law of landlord and tenant. Debt recovery and the County Court. The law relating to cheques, bills of exchange, etc.

4. METHODS OF BUSINESS AND PRINCIPLES OF ADVERTISING—

Buying and stocking; relation of stock to turnover; storage of stock. Methods of arranging and fitting the modern shop. Management of a staff; distribution of duties. Salesmanship; canvassing; the care of the rounds. How to prepare for and carry out a stock-taking. The price list, the handbill, the poster; special offers and displays; sampling. Preparation of "copy"; effective distribution. How to gauge results. Appropriation of cost. When and how to embark on advertising schemes.

5. PRACTICAL TESTS—

Tea matching, valuing, and blending. Coffee roasting, valuing, and blending. Provision tests, including bacon, butter, margarine, cheese, etc. Invoicing, weighing, wrapping, parcelling, and tests on practical matters generally.

It is obvious that much of the work of the first and second years is directly within the province of the commercial teacher—all but commodities can, in fact, be satisfactorily taught by him, the circumstance that students are practically engaged in business offsetting largely the defects which must to some extent attend the teaching by a layman of the second year's course in methods of business. With due preparation, the following syllabus, however, can be carried out by the commercial teacher, and will meet the case—

GROCERS' METHODS OF BUSINESS

Second Year

1. *General Theory.* Functions of trade or business; groups and divisions; the retail trade—units; classification; the irregular trader; the small general shopkeeper; the typical tradesman and his economic services, advantages and disadvantages; the multiple shop; the departmental store; the co-operative store.

2. *General Principles of Retail Trading.* Selling price and profits; expenses; factors in profit; trade and association prices; cheap buying and cheap selling; suppliers' combinations; what is a low buying price and what a high selling price; study of the customer—his requirements and points of view; principles of stocking; principles of publicity.

3. *Rules and Regulations.* General principles and considerations; general shop rules; special shop rules.

4. *General Commercial Knowledge.* Correspondence; handling and filing of papers; ordering; receiving and checking goods; books and records; returning empties; invoices and accounts; methods of payment and necessary technicalities, including cheques, the bank, and bills of exchange.

5. *Principles of Salesmanship.* Over-ruling object—to sell advantageously; the retailer's reputation his greatest asset; goods have only a limited power of selling themselves; studying limitations and opportunities—personal and circumstantial; selling an art and, therefore, a subject which can be studied as well as practised; personal conduct and deportment, and its effects; the time to speak; stages in selling.

6. *Staff Management.* Mechanical and human efficiency; general principles of man work and efficiency; stimulating employees—methods and results; the spirit of loyalty; concentration of effort; working conditions and their physical and economic effects; wages and considerations arising; interest and enthusiasm; managerial qualifications; the exercise of authority.

A more difficult type of course to provide is one suitable for the retailer generally. There are many forms of trades and retailing which cannot possibly exist in sufficient numbers

A More General Type of Requirement in a locality to enable separate provision to be made for them. These cases seem to call for some means of assistance on lines similar to those just considered, but more general. With so much concentrated and definite work to be done with commercial students proper, this wider and somewhat more remote sphere of commercial training has not been attempted, or at least, not in any general sense. The need may disappear as commercial education advances, but, meanwhile, there is no question that a present demand actually exists.

A modern feature in technical education, and one promising of good results, is the rise of what are known as "Trades Schools," or (when recognised by the Board of Education

Trades Schools under special regulations) "Junior Technical Schools." These schools are primarily for intending artisans, and seek to train with a proper technical bias, boys and girls leaving the elementary day school. Of course, the type of work undertaken in these schools is technical and scientific to an almost exclusive extent; yet there is a limited demand for the commercial teacher in such subjects as English, arithmetic, geography, and industrial history. Hence, the reference which is made here to this type of school. Attempts are made in some places to combine a day commercial school with the trades school, and where this occurs the commercial teacher has a definite field. In principle, however, the two types of school are distinct, and very little common ground exists between them.

CHAPTER XXII

ARITHMETIC

THE objects to be kept in view in the teaching of arithmetic to commercial students comprise—

**Objects
in Teaching**

1. Practical manipulative ability in the use of numbers for the purposes required in business.
2. Knowledge of the science of number and the principles of arithmetic that will give resourcefulness in their use in business.

3. Training of the mathematical faculty for its educational value.

These objects are all important, but are presented here in their relative values. Were it not for the applications of the subject in practical work, the time spent upon it would be better spent in pure mathematical training, the great variety of conceptions and the more abstract aspects of mathematics yielding a mental discipline of the highest order. As it is, the lower value of arithmetic in these respects is counterbalanced by its practical necessity. And since the limitations of arithmetical calculations are very pronounced, unless they entrench upon mathematical reasoning and processes, the science of arithmetic needs to be as thoroughly taught as possible, in order to give the maximum skill and resourcefulness in its practical application. Speaking generally, the least valuable aspects of arithmetic from the educational point of view are of the highest and most frequent practical value.

The bulk of the practical use of arithmetic in business lies in the application of the four simple rules to pure and applied numbers

**Scope
of the Subject**

and to decimals. In these applications, every available use should be made of all processes facilitating rapidity and accuracy; for, whilst approximations have occasional value, less than an accurate result is usually worthless, and often injurious. Generally speaking, therefore, the acquisition of the art as distinguished from the science of the subject, defines its scope. Put into more technical form, the scope of the subject comprises—

1. Dexterity in the fundamental rules, particularly of addition and multiplication.

2. The compound rules comprising calculations in money, weights and measures, with conversions into foreign equivalents.

3. A thorough knowledge of decimals applied both to decimal calculations and to ready conversions of common or vulgar fractions.

4. Application of the arithmetical processes of proportion, averages, percentages, discount, interest, involution, and evolution.

5. The application of practical means to facilitate calculations by the use of graphs, logarithms, and the slide rule.

6. The use, as complementary to the limited functions of arithmetic proper, of the simple rules of mensuration and of algebraic symbols for the solution of simple problems.

The methods of teaching arithmetic will vary according to the object of the particular lesson or the subject matter of it. If the

Methods of Teaching	object is to inculcate dexterity by the application of an abbreviating process, the first requisite is to ensure that the method is perfectly understood.
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To this end it will first be established and then exercised. To establish a method, it is necessary to proceed clearly and on lines which cumulate the demonstration or proof. Hence, there will be—

1. A statement of the object sought.

2. A demonstration of the method of achieving it.

3. Repetition of the method as may be required to ensure complete apprehension of all the mechanical steps involved.

4. Demonstration or proof of the accuracy of the process so as to carry confidence or conviction.

5. Manipulation of the method in various ways if it admits of variety of application.

6. Application by the students themselves until the requisite dexterity has been attained. This application should partly be immediate and partly renewed or subsequent.

7. Sufficient repetition of the practice to ensure remembrance of the method and readiness to apply it as occasion requires.

If the principle of the abbreviating process admits of various applications, so that cumulatively there is much to acquire, then each step in the various applications may require to be fixed by sufficient repetition or practice by the students as will enable them

to understand it thoroughly and without confusing one step or application with another. Accordingly, number five in the preceding may come last, and all of the other steps may need to be repeated each time a fresh application is considered until, finally, the complete method is exhausted in all its applications—one thing at a time is more than a maxim in teaching: it is a fundamental.

If the object sought is the demonstration of a principle of arithmetic, as, for example, of decimal notation, every advantage should be taken of the mental (educative) value of the occasion. As far as possible, therefore, the method will be one of discovery and not of illustration or demonstration. This requires the method of approach to be carefully thought out beforehand. There will seldom, or never, be an "only way," although there may not be many *good* ways. The method of discovery involves—

1. Control and direction of the investigation throughout, but avoidance, as far as possible, of "telling" or "showing."

2. Keeping hold of every thread or stage in the discovery, and maintaining all such threads before the students until they cumulate to the full principle sought—

3. Questioning, so as to direct the ideas as they evolve and focus them on the right point. If the requisite ideas do not evolve, questioning may give them the right inception so that they do emerge.

4. Deletion of the incorrect conception by demonstrating or eliciting its fallacy.

5. When the discovery is complete, it requires to be—

- (a) Summed up, or succinctly defined, so as to give clear and fixed apprehension.

- (b) Tested by investigation and confirmed by application.

An example of this will be found in the chapter on "Lesson Preparation," where notes are shown of an investigation of the decimal principle by deducing it from the simple theory of number.

Where the object sought is the application of an instrument for facilitating arithmetical operations, as, for example, of the slide rule, the method of procedure may—not necessarily "should"—be to—

1. State the object sought (*i.e.*, the practical value or application of the instrument).

2. Demonstrate the principles upon which it is based.

3. Show its manipulation. This may, of course, require to be done piecemeal, one step at a time.

4. Give the necessary practice so that the students shall attain the requisite facility in its use.

It is sometimes said that arithmetic is arithmetic pure and simple, and that there is no such thing as "commercial arithmetic."

**Transition
from Academic
to Practical
Arithmetic**

The argument is entirely academic, for there are substantial differences both of attitude and of practice. And first, of attitude. School arithmetic is taught fundamentally for its educative value—in elementary schools and with very young students, arithmetic is the first systematic study of the abstract, taught at every step, it is true, by making everything as far as possible concrete; the concrete, however, is temporary and transitional, the ultimate object being to enable the rules and operations to be applied to abstract thought and manipulation. In commercial arithmetic, the attitude to be cultivated in the students is entirely that of making arithmetic *a working tool or instrument*. Rules and operations have no consideration as such; form and customary method vanish. What is wanted is the result—quickly and accurately. Intermediate steps have no value in themselves and are negligible except in so far as they need to be recorded during an operation in order to revise or confirm the result. The teacher should, therefore, proceed to inculcate the ruling idea that practical requirements are always to be remembered. Accordingly, beyond the fundamental science of numbers, few of the school methods are to survive. Thus—

1. Addition takes no fixed form—vertical and horizontal calculations are to be equally facile.

2. Subtraction by complementary addition becomes a mere process of writing down the result.

3. Multiplication has no form beyond the minimum, and that is contracted promptly and unhesitatingly in accordance with the nature of the result required. Compound multiplication becomes nothing more than simple multiplication with a few working figures.

4. Interest, discount, percentages, stocks and shares, profit and loss, and the like, all become simple decimal operations in the manipulation of a few figures. Formulae as such are here

unnecessary: all that is wanted is the fundamental idea or relationship of the working facts, and the rest is mere operation.

5. Form, when allowable, is merely an aspect of the practical (*i.e.*, it is orderliness which is necessary and conducive to accuracy). In this respect, commercial arithmetic offers an excellent training in business penmanship and orderly arrangement.

In giving a practical conception to all operations, the teacher must constantly look to the deletion or suppression of waste effort, and process. Individually, many of these may be trifling, but cumulatively, they are enormous—always regarding enormity from the practical point of diminishing output or working effort. Commercial arithmetic thus conceived, is a speeding-up process, as essential to an efficient clerical output as the elimination of waste and useless processes is in a manufacturing operation. And, conversely, the teacher must introduce order and method into places where there has been no order or method. Examples are given in the course of this chapter.

In commercial arithmetic, this, as already said, is of fundamental importance and should receive as much care and consideration as possible. The ruling idea is to devise methods which will give the maximum practice with the minimum writing or working machinery, and may be illustrated by the following—

1. *Blackboard exercise in mechanical addition and subtraction—*

Line Number.	Column Number.								
	1	2	3	4	5	6	7	8	9
1	3	4	5	3	4	5	4	3	4
2	4	3	4	4	3	5	4	4	3
3	5	4	4	3	3	4	3	5	5
4	3	5	5	5	5	5	5	4	4
5	3	3	3	4	4	3	3	3	3
6	3	4	4	3	3	4	4	4	4
7	5	5	5	5	5	3	3	3	3
8	3	4	4	4	4	5	5	5	5
9	4	3	2	2	3	4	3	2	4
10	5	5	4	4	5	5	4	4	3
11	5	4	5	5	3	2	5	4	4
12	4	3	2	5	4	3	4	5	2

Instructions may be spoken or indicated by pointing, such as.

Add column 5, continue with column 3, then with line 3, line 6, etc., to any extent required. The numbers can be changed from time to time, and, particularly, can be used progressively until extreme facility is attained with any numbers. The possible combinations of the given figures are all exhausted by the arrangement. The same idea can be used for homework, the students taking a definite copy, so as to be all agreed upon the answers. Of course, the object sought must not be defeated by line and column totals being noted and results obtained by merely adding these totals. When written answers are given in, they should be arranged and verified. Thus—

1st Total.	2nd Total.	3rd Total.

The first total is obtained by adding in the order given, the second by reversing the order, and the third by repeating either one or both when the first two totals disagree.

2. Combined written exercise on the fundamental rules—

Line No.	Add			Subtract			Multiply by			Divide by
	7	8	9	6	13	17	8	9	13	12
1										
2										
3										
etc.										

A specified number is given with which to commence, and the rest of the procedure is cumulative both vertically and across. Thus, if the given number be 87, 7 is added successively down the first column; 8 is added to each of these results to form the second column; then 9 to each result of column two, and so on. The final column checks all the anterior results and is all that requires normally to be marked. The whole exercise compels neatness of penmanship as an indispensable element to accuracy of results.

Hence, the exercise combines all the elements of a piece of practical business work. The method may be adopted to teach the multiplication tables from 13 to 19, or to give sufficient familiarity for them to have very practical utility.

3. *Application of the above to decimals and percentages—*

Given sum.	7½%	7½% added.	9%	9% added.	15%	15% subtracted.
d.						
8						
11						
15						
36						
60						
etc.						

Following the instruction received in percentages, students will readily realise that 7½ per cent., 9 per cent., and 15 per cent. are respectively .075, .09, and .15 for each unit, and merely require to be multiplied by the particular quantity. The exercise is illustrative only, and can be applied in several ways. Thus, the percentage could be calculated each time on the same left-hand quantity (*e.g.*, 7½ per cent. on 8d., 9 per cent. on 8d., 15 per cent. on 8d.). To check the answers, the pupils would be required to total the various columns—an addition of decimals of a really practical character—and the final figures only would need attention. A more difficult exercise would be to make the 9 per cent. to be taken on the preceding total, and the 15 per cent. on the resulting total. In this case, a limitation to, say, three places of decimals would need to be imposed and the number of lines in the exercise limited reasonably. Again, the given sum might be in £ s. and d. The first right column would then be to decimalise the given sums, and then the exercise would follow on.

The practice of ignoring tots because of the difficulty of getting sufficient examples and copies for class use, and, conversely, the constant changing of disconnected examples, can be avoided by a little ingenuity and method. For example, let a sheet of ruled foolscap paper be prepared for compound tots, as follows—

**Self-checking
Tots**

1	346578	19	8	34				67			100		
2	etc.			35				68			101		
3				etc.				etc.			etc.		
4				to				to			to		
5				66				99			132		
6													
etc.													
to													
33													1

The sheet grows gradually. At first only one column of figures need be dictated—the taking down accurately is itself an excellent exercise. The first use, then, might be to add lines 1–13, 14–25, 26–33, then getting the total of these results and checking it with the ascertained total of the sheet. Properly arranged, the answer would be supplied thus—

1–13			14–25			26–33			Total.			Column Total.	

Further practice is continued as necessary, various ranges of lines being taken. When the second column is duly filled in, the line ranges can be increased (*e.g.*, 1–25, 26–45, 46–66). And so on with the remaining columns. In this way the student can never bring an incorrect answer (unless instructed, for the purpose of reasonable limitation, to perform the additions once only and bring them in correct or incorrect). The presence of the sheet in class always permits of a class exercise being set as and when required. Two or more columns can be united in order to make one long one, by the sheet being cut and the strips pinned or pasted to the required length.

In addition to the elimination of the ordinary school methods of arithmetical operations, the teaching of commercial arithmetic should go further. Attention should be paid to the various details of manipulation and arrangement of work, and economy of effort should be unceasingly required. And, conversely, inappreciation of necessary precautionary methods and practices should

**Elimination of
Waste Effort ;
Conversely
Conservation
of Effort**

be pointed out and cured. Such details as the following are cases in point—

1. Putting down carrying figures in multiplying; conversely, failing to put down the figures of addition totals as they are obtained and to retain them until checked for accuracy. Very little practical experience serves to emphasise details of this kind.

2. Working with figures of no significance in the result. This obtains with all beginners in commercial arithmetic, because inadequate attention is given to it in school work, and also because there may be a certain amount of disciplinary value in "literal" accuracy. At least, it is not to be wondered at when one finds in a work on arithmetical principles written specially for teachers, that compound interest calculations are carried out (through two pages of worked illustrations), up to *fifteen* decimal places.

3. Putting down the multiplier *under* figures to be multiplied when it is already obvious; entering products and ruling during the process of long division; working out figure results to fractions of farthings instead of to decimals of a penny when fractional values have relevance; conversely, working discounts to farthings, men, truck loads, etc., to fractions, and the like, without appreciation of the absurdity of doing so, so far as regards any rational purpose.

4. Working unnecessary conversions instead of decimalising and, subsequently, if necessary, converting the final result into sub-denominations. Frequently this is caused from an unexpressed or unrealised "fear" that something impossible of working out may crop up. Similarly, the carrying of conversions up or down to unpractical denominations needs to be corrected, such as lengths of walls to poles or furlongs, gallons inappropriately to bushels, and lbs. to stones instead of to quarters and hundredweights, or leaving them as lbs., as the case requires.

There is danger of the functions and use of formulae being misconceived. What is the function of a formula? It is either:

Place of Formulae	empirical or economical of effort. In pure mathematics, the proof and understanding of a formula is a necessary part of the science; in practical mathematics, it is usually extraneous and the use and application of the formula is the whole object. In the one case, the formula is logical; in the other empirical, and it is usually in the latter sense that a formula is required in
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commercial arithmetic. For example, formulae in the mensuration calculations which it is desirable to include under the head of commercial arithmetic, are to be regarded entirely as empirical. Some of them admit of ready demonstration, but the bulk do not, because the students have not the necessary mathematical training: the formulae are here *working tools*, not educative material. On the other hand, the use of a formula for ordinary interest calculations is unnecessary; the operation should be automatic and executed without formality. If temporarily desirable in teaching and in blackboard work to save verbiage, such a formula has value, but it should still be precluded from incorporation in the students' own exercises: in the one case it is an economy, in the other a crutch.

The use of algebraic symbols and operations in arithmetic is debatable, but it is suggested that symbolic representation in a simple way is very desirable and valuable, and that, without much time or labour, the teaching could easily extend so as to include simple equations and even easy simultaneous equations.

**How far should
Algebraic Symbols
and Processes
be Adopted?**

There is good mental discipline and an easy excursion into abstract conceptions in so doing, whilst certain really simple problems do not otherwise admit of solution. This brings up a further question as to how far commercial arithmetic should include the working of problems. Remembering that many students have had no mathematical training and are not likely to receive any, there is a good deal to be said for the regular working of graded problems. The mental operation is so distinct from that of mere calculation that it is valuable on that account alone, whilst it further makes arithmetical operation to be in a very real and practical sense a use of arithmetical knowledge as a working tool. This aspect of problems is frequently overlooked in favour of the more obvious application of arithmetic to processes.

The first function of class exercises is to give immediate practice in each new step or principle as it is taught: application can never follow too soon. Used for this purpose, class exercise should be as brief as possible, so as to give the greatest amount of variety that time will admit: longer exercises should be relegated to homework. And, speaking generally, a number of short exercises is always better in the classroom than long ones, for every student

**The Use
and Function
of Class Exercises**

can then *complete something*. There is always a sense of discouragement and dissatisfaction when a student fails to get a result after a certain amount of effort, and if the effort has been extensive there is a further sense of having been baulked. In order, however, that all shall be kept fully occupied, the examples to be worked should be indicated in sufficient number at the commencement and not be dribbled out as odd students happen to outstrip the rest. There is sure to be wasted time and dilatoriness amongst the students if there is not abundant scope for even the fastest.

Besides the use of class exercises for clinching instruction, there is also their use for exercise pure and simple. Under the normal conditions of continuation teaching, however, there is seldom time enough to make classwork suffice for this purpose. A certain number of students may not be able, from one reason or another, to do much homework, but certainly it is the function of homework to give the necessary exercise for practice and proficiency, and the less classwork of this kind that is given, the more homework is likely to be done.

One point in this connection is important—the class time should never be entirely appropriated to exercises. It should be an inflexible rule that *something should be taught or demonstrated at every class meeting*; otherwise its absence will have entailed the loss of something of value.

Arithmetic, like language and shorthand, is a subject requiring regular and frequent manipulatory practice. Hence, homework is

essential, and it is better if students can be got to

Homework distribute its performance over more than one occasion between each class meeting. For example,

all exercises for mechanical efficiency should, during a certain stage of progress, be practised as regularly and frequently as possible. Ten minutes daily at tots will do far more than twice the equivalent time spent upon one effort. It is scarcely to be expected, however, that students will so arrange their time in this way as the direct result of exhortation. Hence, too much work for one sitting should always be given, and the amount should be substantial enough to impel students, if possible, to give three or four sittings. This, however, is better not admitted by the teacher, who, instead, should emphasise the importance of daily practice, allocate the set work as for each day, and then, by judiciously

measuring the amount, aim at securing a maximum of actual sittings. A further point is that exercises for mechanical efficiency should not be set as any one complete homework exercise; there should always be other exercise matter requiring set questions to be answered. In general, no text-book reading matter is necessary: if reference to the text is required in the working of examples, that is all that should be expected. Arithmetic is a subject for the classroom to teach and for homework to practise.

CHAPTER XXIII

BOOK-KEEPING

THERE is no subject in the commercial course which compares in fundamental importance with book-keeping. It pervades every business transaction and every business finds in it its breadth and depth and height. Within the compass of its records, book-keeping discloses the whole history of the origin, growth, and development of any business, and at any moment is a reliable barometer of its fortunes—past, present, and future.

Importance

Objects in Teaching

There are some subjects in which “a little knowledge is a dangerous thing,” but whilst a little knowledge of book-keeping may be even a disastrous thing, yet a little knowledge is also a valuable thing, and should be acquired by every commercial student: indeed, if it were not Utopian to expect, it ought to form part of all general education.

It is typical of the commercial course generally that the students in book-keeping are of a most heterogeneous character. The types may be thus indicated—

1. Those who study it as an accepted part of the commercial curriculum just “because it is there” or because they are required to take it up. These may never expect to use it in the practical sense, good as it may be as an investment in commercial knowledge.

2. Students who require to know how to keep a set of simple books, such as a retailer’s or tradesman’s—often the books of their parent’s business.

3. Students of the type of foremen or enterprising journeymen ambitious of improving their position, the realisation of which will involve a knowledge of accounts and costing.

4. Those who propose to make book-keeping their business career. These students are generally like leeches and seek to draw only one kind of blood—book-keeping is their one and sole sustenance.

5. Youths who are articled, or seek to become articled, to an accountant, and who meanwhile are studying book-keeping as an introduction to their professional career.

6. Those who seek a knowledge of accounts less in order to be able to keep them than to be competent to supervise the work of others and so be able honestly and efficiently to take personal responsibility therefor.

With promiscuous students like this, there can only be one satisfactory object to be kept in view—that of teaching broad, essential principles and general lines of practice. In the advanced stages of the subject most of the nondescript elements will have disappeared, so that those who remain may be properly regarded as students of book-keeping who aim at becoming experts. Details of both theory and practice then become necessary, and it is here that the real science of accounts develops and calls for expert knowledge and wide experience on the part of the teacher.

Real and substantial injury has been done to the cause of commercial education by the excessive demands which teachers of book-keeping have made upon teaching time and upon students' time. Over and over again, well-planned schemes of commercial training have been vitiated, if not frustrated, in this way. There are still to-day teachers who maintain that the book-keeping lesson should be one of three hours' duration, whilst it is common to regard an entire class evening as the minimum weekly time which the subject should receive. This attitude is fostered and supported by the character and mass of the exercises which the standard text-books contain. Not only does exercise follow exercise, but examination paper follows examination paper *ad nauseam* and scandalously—one may almost say malevolently. Admitted, book-keeping is a practical subject, and as such demands that dexterity and skill which can only be born of abundant practice. But when a subject is so pressed by its exponents that students gladly forsake all the other elements that go to the making of a sound business training and a well-balanced mind, the evil is unmitigated. The whole point of view with respect to practical work is, in these cases, altogether wrong. Always and ever, skill that is comprised in a sound grasp of principles needs the least exercise and is most reliable. It is not the function of the commercial class to give expert experience in a subject which is essentially based upon theoretical principles, any more than it is the function of the mechanical engineering workshop in the technical institute to supersede the works training

**A Well-founded
Grievance**

of the apprentice. The commercial classroom is the experimental laboratory or the lecture theatre only—not the workshop or the forge, the counting-house or the office. In short, the book-keeping lesson has no more claim on the time-table than the lesson in any other subject, and the classroom is not the place for producing a weekly replica of a week's practical accounts.

**Scope
of the Subject**

What, then, should be the scope of book-keeping ? Clearly not the colossal mass represented by the ever-growing text-books. The limitations do not

admit, for—

1. The teaching time allowable is limited, as are also the financial means.
2. The students' time is limited.
3. The students' educational and commercial needs are greater than book-keeping.
4. Text-book book-keeping is not an equivalent for practical experience.
5. Students of continuation school age, and especially in their earlier years of commercial training, do not take charge of businesses. The normal student will have a long time to wait for this responsibility, and, meanwhile, both book-keeping and other subjects can grow at proportional and not at mutually destructive or exclusive rates.

Now, it would be quite possible to make the commercial course one continuous expansion of book-keeping, the subject serving as a kind of universal curriculum. As it is now, it

(a) **Overlapping** is the worst overlapping sinner, the theory and practice of commerce excepted, and, consequently, its scope needs very clear definition. Where the subject is taken alone (*i.e.*, not in conjunction with other subjects to form a "course") the teacher has a free run, and can contract or expand over the widest possible range. In all other cases, the relation of the subject to others which the students are studying should always be borne in mind. Under these conditions, subjects like the following—included in some text-books and, in consequence, "claimed" by some of the teacher users as within their province—are easily carried too far—

1. Bills of exchange and cheques treated in their full aspects.

2. Law of partnership, and a detailed consideration of partnership entirely irrelative to the requirements of book-keeping.
3. The like, more or less, with respect to companies.
4. Insurance.

In practice, the teacher makes detailed incursions into the subject of business practice, dealing with invoicing, indexing, card records, keeping of a banking account, and so

(b) **Lower Stages** on, so that it not infrequently happens that the students get the same lesson twice in the same week—once from the book-keeping teacher and once from the teacher of business practice. With eccentricities like these, no course can be properly worked. Definition and limitation of spheres is essential, and must be reciprocal. In lower stages, the subject should be as strictly confined as possible and should comprise—

I. FUNDAMENTAL IDEAS AND PRINCIPLES.

To be taught and absorbed by repetition, application, and illustration.

1. Book-keeping is a study both of principles and of technique.

2. Fundamental principles not to be departed from include—

(a) The principle of double entry or equivalent—everything has its converse or offset entry.

(b) An unbroken thread of reference or sequence runs throughout—the origin and transference of everything is connected by an unbroken chain of record.

(c) All book-keeping is cumulative—everything is part of the complete arch or fabric, and nothing is ever lost. Hence—

(i) Errors are cumulative: they do not disappear and, therefore, they always count. They cannot be neglected.

(ii) Everything moves forward, converging to a final result: nothing tails off, fizzles out, strands, or disappears.

(iii) Everything possible must contribute to accuracy—neatness of execution, care, set forms of ruling, transfers, and methods of transfer, etc.

II. TECHNIQUE.

1. General forms and methods of keeping subsidiary books. Analysis and synthesis.

2. A merchant's and manufacturer's accounts.

3. Partnership accounts.

4. Company accounts.

5. An example of tabular accounts.

6. Income tax returns.

In advanced stages, ramification and elaboration are most difficult to avoid. But, once again, the relation of other subjects must be considered by the teacher. If, for

(c) **Advanced Stages**

example, the students have taken commercial law or a class in business organisation, this knowledge should be both presumed and applied—not repeated. On the other hand, if they have not had such training, care must be

taken not to get side-tracked in matters that may be interesting, useful, or desirable, but which, if taken, subtract from the amount of technical study which might otherwise have been given to the scientific aspects of book-keeping. The following scope may be suggested, the comprehensiveness of the treatment depending upon circumstances—

I. PRINCIPLES.

1. Accounts are organic. Hence—

(a) A balance sheet is only a general pulse.
 (b) Contained within the body of accounts are important evidences and facts which may have valuable significance if detached or adequately recognised. The organisation of accounts becomes, therefore, a matter for careful study in order to expose all necessary evidences.

(c) The well-being of the part is a source of strength to the whole. Accountancy becomes the necessary consequent of complex book-keeping

2. Book-keeping is an invaluable requisite to organisation.

(a) It guides co-ordination and systematisation.
 (b) It furnishes checks, stimulates efficiency, compels economy, reveals incapacity.
 (c) It indicates lines of progress and of retrenchment.
 (d) It is a constant safety-valve pointing out and measuring threatening dangers, or generating force.

II. TECHNIQUE.

1. Book-keeping machinery: Self-balancing ledgers, departmental accounts, cost accounts, reconciliations, etc.

2. Conservation and renewal of capital—study of reserves, sinking funds, depreciation, etc.

3. Further study of company accounts; particular forms of accounts, liquidations, bankruptcies, etc.

Methods of Teaching

There are two ways of approach to the teaching of book-keeping—the theoretical and the practical. In approaching by the theoretical method, certain “elementary theory” is discussed, and an endeavour made to give in outline, a general conception of the machinery and objects of book-keeping. Afterwards, certain methods of

(a) **Via Theory** transition are developed, and it is considered that in the sequel “practical” book-keeping will be better understood. There is real danger, however, of turning intended aids into added difficulties. Thus, it is still a procedure in this method, to teach beginners to journalise all transactions. The practice cannot be too strongly condemned, for not only is it contrary to actual requirements, but it is very much like creating two difficulties in order to solve one. Difficulties as to the “side” when posting—which presumably form the justification for this

preliminary journalising—are manufactured difficulties. There should not arise a moment's doubt in students' minds if the functions and relations of the subsidiary books have been properly indicated—posting should be automatic. A "Goods" Account presents another example of a theoretical device that does more harm than good.

Under the practical method of approach, the subject is opened out much in the same way as the student would himself make practical acquaintance with the subject in business.

(b) **Via Practice** Thus, subsidiary books are treated, their relation to and incorporation into the general accounts follow, and the "system" of book-keeping is gradually built up until it stands out as a complete organisation of financial record. Theory comes in as it is required, and straightway links up with the practical.

Of the two methods, the practical seems the more desirable; the goal is not brought into sight so soon, but its gradual discovery maintains interest by presenting the "play" (as it were) as itself furnishing many subjects for interest and study, and duly coming to climax in the sequel. The two methods are much like introducing a beginner to a game *via* its rules and *via* its actual practice; and, since book-keeping is essentially a practical subject, the analogy of a game is not inappropriate.

Later, when book-keeping is studied from the analytical point of view, and practice is well founded, the approach to new subjects may most properly be made *via* theory and discussion. The basis of general technique being understood, it affords ample ground of knowledge upon which to base discussion; and the new technique then naturally follows as being the application of new machinery for meeting new requirements.

(c) **When Theory first** It is difficult to deal with book-keeping in the ideal way—by actual books and documents. One pervading element of dissatisfaction runs through the whole field of technical education—the breakdown of practical work. Sometimes it partly results from lack of equipment, but always there is the dominant weakness—lack of student time. Nor is the commercial course an exception. As regards book-keeping, *if* the materials (equipment) could be

(d) **Practical Documents and Illustrations**

provided, and *if* the time could be spared, a whole session might profitably be devoted to passing a well-selected and organised set of accounts through actual books and preparing as for audit. Where it can be done, however scrappy or makeshift, the practical illustration should be introduced. In addition, and in lieu where practical illustration cannot be given, verbal illustrations drawn from practice and from practical experience should be utilised as much as possible. Students not only want to know how things are done, but why; the why and the wherefore in book-keeping are essential. In the higher stages, actual documents in illustration have the greatest possible value, and, of course, their intrinsic value being great, they are more difficult and often impossible to get. A palliative of the misfortune, however, is to be found in the circumstance that students will, individually, have had a good deal of practical experience, and can the more readily follow and appreciate verbal illustrations.

How far should detail work be done upon the blackboard? In the early stages, a good deal of careful blackboard detail is desirable. General facts and principles may be
 (e) **How far Blackboard Work?** illustrated freely and with no more form than will suffice to make the statements clear and present them to the eye as well as to the ear; so soon, however, as working details are dealt with, it becomes desirable to set them out carefully in a blackboard illustration, and the students themselves should work stage by stage with the blackboard example. In later stages, blackboard work is less important, and text-book and verbal illustrations can be more extensively resorted to, particularly as worked or working illustrations become very bulky and cannot very well be accommodated on a blackboard.

In the early stages, the manipulation of the blackboard should be characterised by neatness and order. Rulings should be carefully done and shown in detail. Figures should
 (f) **Manipulating the Blackboard** be well-formed and clear, being made visible, as far as possible, to all parts of the class. In this respect, much depends upon the size of the blackboard: it should be as large as can possibly be secured, and the teacher should make a point of ascertaining which is the largest board in the institution, or, if there are wall blackboards, then he should try to obtain the room which presents the most blackboard area.

The ruling of lines on the blackboard is tedious, and the time taken also tends to affect the discipline of the class. The teacher should, therefore, cultivate facility with the chalk and blackboard ruler, and also require the students themselves to rule up their paper, as this exercise is particularly valuable to beginners. It needs scarcely to be repeated here that fixed blackboard rulings should not be employed.

Students' classroom work should be strictly limited. The object of classroom exercises is to fix knowledge and not to gain facility: the latter is the sphere of homework. At the same time, the classwork should be carefully executed and come under the teacher's general inspection during the time that he can leave the blackboard for brief tours amongst the class. In order that this work may be controlled, and the lesson reach its proper conclusion before time expires, the exercise matter should be carefully fixed upon beforehand. It may be selected from an exercise or incorporated piecemeal by the teacher's instructions and from his illustrations. A due proportion between writing and listening should be effected, and every endeavour made to give each lesson an entity of its own; there should be a definite object and the object should be attained.

(g) **Strict
Limitation of
Students'
Classroom Work**

Reference has already been made to the undue exactions which book-keeping teachers make upon the total amount of teaching and of homework time. In repeating here the reference to the latter, it is merely to emphasise the necessity for its careful limitation. It is not suggested how much work measured in actual hours may be properly set—much depends upon the students and the nature and extent of the other subjects of the course. It is the duty of the teacher to ascertain these facts for himself, and to proportion his own demands accordingly. To a certain extent, the general organisation may exercise some control, but usually it does not, and the teacher is himself master of the situation.

Homework

The general requirements of homework should not be lost sight of, and not least that the exercises set should be quite within the capacity of all students to perform without home or other external assistance. The estimated time required by each homework task should be based upon the time which is in general at the disposal

of students, and this consideration accordingly governs the length of any particular exercise, the rate of working being based as carefully as possible upon the average capacity and with a fair margin for the time required to overcome difficulties. If, under these circumstances, long enough exercises cannot be set, a portion of the work should occasionally be allowed to spread over more than one week; the general rule, however, should be to set a self-contained exercise each week, eliminating, if the text-book exercise is too long, those points which can best be omitted. In particular, whilst new facts or principles are being studied, the home exercise should be as specialised as possible, and more general matters excluded. This means that the teacher must look into the proposed homework exercise and adjust it before the class meeting at which it is to be set.

In marking book-keeping home work, the teacher may reasonably avail of the students' assistance to some extent. Thus, before it is collected, a total here and there and one or two leading points may be checked, the students ticking off where necessary. Afterwards the work can be collected for subsequent assessment and return. Of course, only a very limited amount of class time should thus be appropriated, and it may be added that even those portions marked by the students require subsequently to be glanced over, as, in practice, various divergencies from the correct answer will have been passed undetected. General points to be attended to include—

1. Form and neatness.
2. Working details such as folio references, balancings, transfers, closing of accounts, narration, etc.
3. Actual results as shown by figures.
4. Technical matters relating to method and principles.

All these take up a considerable amount of time unless the work is really excellently done, and the extent to which corrections should be carried calls for consideration. In general, what may be called "consequential" errors do not need following up in detail. In the earlier stages it may be desirable to go further in this direction, however, in order that the student may realise the effect of mistakes, but the same end can also be effected by discussing such points in a general way with the class and particularly making those whose work is affected follow the observations whilst referring

to their papers. The valuation mark should, in general, be an assessment of the whole exercise, and not an allocation of marks to separate portions. What the student should aim at is a workmanlike result; less has no practical value, and, hence, a general assessment best measures the success or otherwise of the work.

The value of a text-book, from the student's point of view, lies in its presenting him with the necessary particulars of the exercises which he will be required to work, and in the

Text-books illustrations and examples of working methods.

The actual textual information offers no attractions, unless for the purpose of examination revision, the student usually preferring to learn from the teacher rather than from the text. Besides, most texts give too little information of the kind the student requires, and too much of an extraneous character, so that he is further repelled on that account. The student's attitude is pretty correct, and, hence, it becomes undesirable to set him much in the way of regular text-book study. Worked examples and illustrative documents should be as abundant as possible, and should be utilised occasionally in place of the normal exercise, such as by requiring some alteration to be effected in a worked example, or utilising it as material for a further exercise. Separate text-books are desirable for elementary and advanced students rather than a complete work for students of all stages.

The practical character of book-keeping seems to call for little or nothing in the way of notes, since the teaching is represented in the practical form of exercise work. The

Class Notes general custom, therefore, is not to make use of class notes; but this is wrong. Elaborate notes

would be out of place, but, the object of notes being to record the substance of the instruction, it follows that the salient points should be summarised as in other subjects. Often the note may be in the form of an illustrative example of some point of practical working, but even when it comprises little more than a few figures, its value may be quite considerable. The keeping of note-books is to be recommended, and not least for recording definitions, explanations, and alternative forms.

CHAPTER XXIV

BUSINESS PRACTICE AND THE THEORY AND PRACTICE OF COMMERCE

I.—Business Practice

THE subject of Business Practice, *alias* Correspondence and Business Methods, *alias* English and Business Methods, *alias* Methods and Machinery of Business, *alias* Office Routine, is a **Retrospective** subject of vicissitudes. Long before the institution of the Course "System" it was felt that something should be attempted to give the uninitiated student some kind of practical introduction to the elementary routine of business. Later, this developed into a pretentious attempt to detail the whole of what may be termed the general procedure of internal and external trade, with the addition of specialised treatment of the more defined and organised services such as shipping, Custom House work, banking, and the Stock Exchange.

The very variety of names and the various points of view that they emphasise, would lead one to suspect that the subject was scarcely satisfactory, either in itself or in its scope and definition. And despite the fact that it attained its majority some time ago, it never attained fame: rather did it meet with contempt and ridicule, both from the layman and from the business man. The layman's opinion may be disregarded, seeing that he is obviously incompetent to judge—the emphatic condemnation he has so often expressed only bespeaks his presumption—but the condemnation of the business man can be less easily brushed aside, for he is the man who should know. Assuming, therefore, that the latter's opinion is justified, where does the fault lie? Is it in the subject itself or in its exposition? The answer is: "In both."

As regards the subject, it suffers, as it has done all along, from the difficulty of defining the common practices of business in such body and system as to yield an adequate and developed course of instruction and practice. And when a solution of this difficulty was not forthcoming, body was given to the subject by the inclusion

of specialised spheres of commercial activities that directly appealed to comparatively few students, and, hence, scarcely interested anybody, seeing that those engaged in them knew more about them than the teaching was competent to discuss. The subject has, in fact, suffered most from its exponents. This began with the first text-books, for, on taking these up, one is struck with the fact that they are all the work of men carrying Arts Degrees, whose expressed qualifications were academic only. This was certainly ominous for the development of the subject, and its disjointed and generally scrappy treatment, together with an absence of real illustration and of practical exercise work, are significant. These early works were followed by a more practical type: men in more or less direct contact with business and business conditions accumulated and recorded much information, vouching for it by the indisputable evidence of the correct business slang. Information thus grew, but the subject, from the teaching point of view, still languished. No practical work of an adequate kind evolved, and there was no consistency and development in the subject matter: it offered no real "training." Even the examples of business transactions which formed a characteristic of this period, and proved illuminating and interesting as far as they went, lacked that progressive development which is necessary for basing a course of instruction upon. Later texts have not been remarkable for any particular advances upon their predecessors: as expositions of business knowledge they have increased in bulk, benefiting, no doubt by the contents and omissions of their predecessors, but they still lack constructiveness for teaching purposes.

Despite these defects, the subject is by no means condemned beyond redemption. It has not survived so long and really fulfilled a necessary and valuable function in order to die now as though its work was done. Its more scientific rival—the theory and practice of commerce—is not entitled to the rôle of usurper. Business practice—whatever name it may continue to bear—has still a function to discharge, and whilst it will have to give way to its rival in the higher field, it is still necessary in a more modest way. It is a fallacy to suppose that scientific study needs to precede technique: the technical student is better for a basis of practical knowledge, and, in fact, this basis is essential to the best progress. In a

**Importance
of the Subject**

parallel way, the study of business methods, combined with suitable practical work, is a necessary introduction for commercial students. Neither the preliminary commercial course, nor the lower stages of the commercial course, are suitable starting-points for a subject of the nature and claims of the theory and practice of commerce. Something is wanting to take off the raw edges from these beginners and to lift the veil of business procedure. This something is precisely the sphere of the older subject, and its importance in this relation is paramount. Where theoretical and practical instruction in business practice is given as part of the typewriting course, the situation may be relieved, but this arrangement seldom, if ever, prevails outside of private institutions, and, hence, need not be considered.

Presuming, then, that business practice is entitled to remain in the commercial course, it is necessary to define its scope and function. Where its function is to become merely preliminary, its scope is readily defined as those elementary and general matters of knowledge and practice which comprise a necessary qualification for those who seek a business career. What has, therefore, been defined as the "home trade," is at once marked out as a definite field. But if business practice had not lost its way—or, better still, if its exponents had not lost their way—the subject would have had a more ambitious and practical scope. Commercial correspondence is *not* the function of the English class, common as it has been to associate these. The English teacher is seldom the man for teaching correspondence—he is usually too academic or too unversed in business, and his correspondence is nothing more than an English exposition: it neither contains, nor can contain, any "business." And apart from considerations of teaching power, the place for correspondence is alongside and in intimate relationship with business practice. The adequate incorporation of correspondence with business practice has not yet found an exponent, but that the association is logical and correct is beyond doubt. A further function of business practice has also been missed—the function of presenting a proper study of business administration and organisation. It is safe to say that, had this function been realised and provided for, the subject would not have met with the dishonour that it has. An entire field of

the greatest practical value has been altogether overlooked. The result is that such matters as advertising and salesmanship have only recently developed: they ought to have been provided for long ago in the higher scope of business methods.

Taking things, however, as they are, it may be said that business methods is a much more satisfactory subject for ordinary continuation courses than the theory and practice of commerce. It is more suited to the capacity both of the teacher and of the students, and without it, or an equivalent, students will never get that really practical assistance which they require and ought to obtain at the commercial institution.

Were it not that the contrary has but too frequently been the case, it would be scarcely necessary to say that the teaching of business practice should be in the hands of a teacher with some practical experience of clerical work. The wide range which has been given to the subject precludes any teacher from having had a full all-round experience: at some stage or other, *every* teacher is, and must always be, out of his depth (*i.e.*, must give his instruction on a theoretical knowledge only). But there is just all the difference between *some* practical knowledge and *none*; the type of practical knowledge is a minor consideration, if not, indeed, immaterial. Where a really serious attempt is to be made to combine correspondence, experience in the actual dictation of business correspondence is an invaluable asset.

The most important factor in the teaching of this subject lies in the teacher's power of exposition. Given the necessary power and lucidity of expression, the simplest detail of office routine can be presented in both an interesting and instructive way, and when the exposition can be followed by a suitable practical exercise, the elements of successful teaching are at command. At the same time, it should be recognised that this is really a difficult subject to teach: there should be no misunderstanding on this point. What, then, are the points to be aimed at? They comprise—

1. Inculcation of the business attitude and creation of the business atmosphere. It will make for the realisation of these objects if business qualifications—personal and educational—and the requirements which business makes of the individual, are suitably discussed.

2. The imparting of certain general and particular information as to business procedure, especially in relation to clerical work. These facts require to be conceived in as organic a whole as possible, in order that they may be combined into a coherent and developing body of knowledge.

3. Imparting sufficient accurate detail of business machinery and duties as will enable the students to discharge intelligently and with business value, any and all of the ordinary clerical duties of the office.

4. Study of the machinery of business organisation as well as its routine.

In order to give a practical character to the instruction, it might be supposed that the classroom ought to be converted as nearly as possible into a business office and, to that end, that a considerable amount of equipment would be necessary. The teacher should certainly have as much material for practical illustration as he can properly use, and, obviously, the more the classroom can illustrate business practice, the better the instruction will be. But it does not follow that it is necessary to furnish the classroom like an office—the functions of the two are not alike, and to attempt to make them so would be to produce the grotesque. There is not the time for detailed practical work, and neither are the working conditions sufficiently reproducible for more than processes and procedure to be described and illustrated; play staging is not the province of the classroom, and it is sufficient that the student shall be taught to understand practice and method. In the higher stages of the subject, practical work is neither desirable nor possible, and description and illustration suffice. Lastly, whilst a good many working materials find their way into office routine, they are all more or less subsidiary to the real work, which comprises calculations, entering up records, spoken and written communications, use and care of documents, and the like. The clerical functions are, in short, the performance of work and not the manipulation of tools and materials.

It is easy to regard the illustration of processes and procedure from too fixed a standpoint; and standardised materials, books, and documents have their limitations. A not unimportant aspect of the illustrative material is to regard as much of it as possible in the nature of a business exhibition. Variety, from this point of

view, becomes as educative and useful as routine—if not more so. So little is really standardised in business that resourcefulness and adaptability are more valuable than precise method. In this aspect, much valuable practical training can be imparted by requiring documents and forms to be drawn up to meet certain specified requirements—the variety of illustrative documents shown or illustrated having thus a suitable and definite function to perform. In order to get the necessary variety of illustrative material, the teacher should lay himself out for gathering an extensive and miscellaneous collection. He will himself learn much by so doing, as well as give to his lesson a variety and value that would otherwise be unattainable.

An Illustrative Syllabus

The following syllabus incorporates and illustrates most of the views expressed in the preceding paragraph—

Introductory. Fundamental and economic characteristics of business; classifications of businesses; typical business organisations. Clerical work in its relation to business; its classification; requirements and qualifications of clerical workers.

Correspondence. Fundamental importance of correspondence in business; definition and characteristics of good correspondence; position and qualifications of the business correspondent; types of correspondence; enquiries and the characteristics of good enquiries; replies to enquiries; rights and obligations of enquirers and enquirees; general handling and recording of correspondence; indexing and filing correspondence; précis of correspondence.

Business Records. Nature and compilation of business records; recording systems; the card index system; method of designing a card index; special applications and accessories of card indexing.

Purchase and Sale of Goods. Elementary classification and consideration of "contracts"; contracts by correspondence; vocabulary, terms, and definitions with respect to buying and selling; general machinery and documents relating thereto, including price lists, quotations, orders, contracts. Rendering of accounts, including invoices, statements, and accounts current, with incidental calculations as cubical contents, freights, and discounts; collection of accounts. Despatch and carriage of goods; the consignment note and the contractual relations of the parties.

Payments. Settlement of accounts; obligations of the debtor and rights of the creditor; payment by currency, cheque, P.O., M.O., and B.E., with detailed consideration of these instruments.

Business Publicity. Forms and agents; circulars and advertising.

Clerical Appointments. Making application for a business appointment.

Office and General Organisation. The personnel and equipment; checks; delegation, centralisation and decentralisation of control; time, staff, sales, stores and stock records. Payment of wages. Personal responsibility. General systems of handling correspondence; delegation; filing methods, with and without complementary card indexing; stationery, printing, forms, summaries, and time-saving clerical devices.

Company Work. Partnerships and companies; clerical and other details relating to secretarial work, including share issues, dividends, transfers,

registration of documents, and the conduct of Board and Shareholders Meetings, together with the general law of meetings; the Stock Exchange.

Insurance. General survey of the principles of insurance; details of fire, life, and marine insurance; other forms of insurance, especially such as have interest for a business man.

Importing and Exporting. Details of importing and exporting, with the consequent forms and documents, including consular and shipping invoices, account sales, accounts current, foreign bills of exchange, bills of lading, charter party, dock and Custom House forms, and correspondence; tariffs; the metric system; the exchanges and the principal monetary systems; leading markets for British goods.

Miscellaneous. General correspondence upon business matters of an advanced nature and calling for tact, discretion, investigation, compilation, or other preparation; occasional précis of difficult and extended matter; drawing up of a report.

Business practice has suffered as much from the character of the so-called text-books as from other causes. There is no subject

in the commercial curriculum in which there is
Text-books
and Homework such great difficulty in finding a suitable work.

It is not surprising that independent teachers give up the search in the lower stages and rely upon their teaching and the students' notes. This course, however, is not to be recommended, and the teacher should select the most suitable text he can find and compensate for its deficiencies by using his own materials. It is certainly highly desirable that students should have a work for reference and study in every subject of their course.

Where an organised scheme is in operation, the homework can be made most practical and valuable. Some examples are given in the chapter on "Homework." In the absence of such a scheme, the teacher should not revert entirely to descriptive questions or the mere repetition of information given or studied. Much value can be obtained by carefully designed constructive subjects. The illustration on pages 275 and 276 is taken from a student's actual work, given in answer to the following typed and duplicated question (of course where duplicating is not available, briefer questions must be given)—

8.—Design, showing back and front, a Record Card suitable for the following circumstances—

An Estate Agent collects rents from many tenants of property belonging to his clients. The conditions of the various tenancies are very different. The Agent wants to know exactly and readily the following facts—

THE PROPERTY.—Name, location, character or nature (house, cottage, shop, farm, etc.); Client's interest (leasehold, copyhold, freehold); Rate Assessment No. and amount; Taxes Assessment No. and amount.

THE TENANT.—Name, occupation or description; Nature of occupation (lease, agreement); Term of occupation; Date occupation began; Date occupation expires; Rent—Annual amount; When payable; Amount payable; Deductions and allowances (if any).

REPAIRS.—By whom to be done; Dates of Client's Repairs, character and amount.

COLLECTIONS.—When due, when paid, amount paid.

The Estate Agent further requires—

(1) To distinguish promptly the weekly, monthly, quarterly, and yearly tenancies.

(2) To know exactly when to make the next collections of rent.

(3) To know exactly all the properties in a given district (*e.g.*, in each street of each town, in each village, etc.).

(4) To know immediately all cases of rents in arrears.

You are also to state what arrangement of guides you would recommend.

II.—Theory and Practice of Commerce

The theory and practice of commerce has partly arisen out of the disrepute into which business practice had fallen, and partly represents a stage of progress in the scientific analysis of business viewed in its organic and economic aspects. Such a development was to be expected after the founding of Faculties of Commerce at various provincial universities; for, so long as commerce was represented only by the degree of B.Sc. (Econ.) of London University, research—and, therefore, progress—was bound to be confined to economics as distinguished from the direct study of commerce, *i.e.*, effort was directed towards scientific thinking rather than toward practical affairs. Naturally, also on account of its academic origin, the shadow of theory is dark upon the new subject, and it is also natural that at present the umbra of the shadow is almost entirely economic. The subject, indeed, is to all intents and purposes, an aspect of applied economics, which, from the academic point of view, forms an attractive field of study, destined to raise the standard of commercial knowledge and to promote the efficiency of commercial organisation.

The present scope of the subject appears to be as follows—

Present Scope 1. *Historical.*—A brief excursion into English Industrial History in order to trace the origin and evolution of retail trade.

2. *Economic.*—An elementary consideration of production and exchange, together with the economic aspects of certain social

[illegible]

[illegible]

problems connected with the organisation of labour and capital, and the economic organisation of commerce.

3. *Business Knowledge*.—Certain aspects of business knowledge connected with the home and foreign trade and the Stock Exchange.

4. *Legal*.—A brief elementary consideration of contract and of the sale of goods, together with a cursory reference to one or two Acts of Parliament having reference to the retail trade.

It will be seen that the subject proceeds from the historic and scientific to the art (or practice) which illustrates the scientific considerations which have been presented for **Science, not Art** discussion. Office routine, with which continuation students are so directly interested, is not touched in many practical and rudimentary aspects which the lower stages of business methods deal with, nor are those executive aspects of business considered which deal with correspondence and clerical organisation. As at present expounded, the theory and practice of commerce is more science than art, and a student, after spending three years of study upon it, might be unable to press copy a letter, fill in a money order, write a business letter, draw up an advertisement, design a card index, or draft a minute of a meeting. Some of these and the like matters are nearly approached, and then away the scientific discussion turns, leaving the teacher neither scope nor time for training students in many practical matters of clerical work.

The sphere of the subject is distinctly at the higher end of the commercial course, and should follow, or assume, the acquisition of the fundamentals of business experience. The **Sphere** subject matter is particularly food for the developed mind: pabulum is eliminated. At the same time, its scope is so piratical that it robs both law and economics, the latter so considerably that the question is raised whether or not economics should be deleted from the commercial course as a separate subject, and, if it is not, whether the students will subsequently accept it. If it followed upon a full course in business practice, and contracted its scope to a theoretical study and analysis of commerce, the subject would comprise a redeeming element in the commercial course, and one adapted to scientific exposition of the same character as economics.

From its nature, the subject requires to be taught as a science. The following methods of treatment, therefore, become requisite.—

Teaching 1. *Analysis and classification.*—The method of investigation and critical analysis runs through the whole subject. The complex or composite must be clearly presented to the students and then disentangled or decomposed into elements, each element requiring in turn clear definition and classification.

2. *Concrete illustration.*—At all points, the application of the theoretical analysis must be illustrated and visualised in diagrammatic and other tangible form; whilst great care is necessary to avoid a mere academic discussion which loses itself without bringing forth any tangible result and clinching it.

3. *Verification of the hypothetical.*—Students must be constantly taught to come back to facts and to test their hypotheses; and to the same end the teacher must be resourceful and well-furnished with facts and illuminating details. If this is not done, there will be a parrot-like acceptance and repetition of the instruction.

4. *Limitation and restraint.*—In treating questions of the magnitude of many of those which the subject embraces, the teacher must constantly limit and restrain both himself and the scope of his treatment: otherwise his teaching will lose proportion—although it may well gain in interest—and the class will make too slow progress.

5. *Application.*—Theory makes or explains practice. All the theoretical discussions should, therefore, lead up to the existing machinery and practice of commerce, and be applied thereto. At one time the object will be to show the application of the scientific principle in the practical organisation of commerce; at another time it will be to show possible or necessary lines of development in the future.

6. *Practice.*—Theoretically, the teacher should always bear in mind that his students are practical people who look to their training to yield them direct help in their daily routine. The utility, therefore, of the subject, might be regarded as one of its most valuable features, and, as such, calling for special attention. Unfortunately, the theory is too extensive and the connected practice too limited—unless a very determined attitude is taken and the maximum of practical application and procedure in

commerce is sought at the expense of the theory. The individual teacher must decide this for himself.

It is somewhat invidious at the present moment to make reference to text-books for this subject, as, owing to its having grown up so recently, there is comparatively no choice. **Text-books and Homework** Probably, however, the very newness of the subject will make it all the more essential that the students should do some definite reading, and the teacher will be wise to select a work accordingly. The text-book should, preferably, as with all students' texts, be confined to the stage which the students are actually studying, and should present a fair bulk of reading matter.

The homework must be very carefully arranged. The subject lends itself so much to discursive written work, and so little to really practical work, that the home exercises should have a strong compensatory bias in the latter direction. Much of the homework, in fact, should follow the lines of the subject of business practice.

CHAPTER XXV

ECONOMICS

ECONOMICS is an ideal subject in the commercial curriculum. Removed from so much that is bread-and-butter study to the commercial student, it is, nevertheless, completely charged with matters of the deepest interest and significance to commerce, which it raises above all its sordid aspects, and presents in the light of a most beneficent and vital work of man. It is conceivable that some other science subject admitting of laboratory experiment would have presented a still higher study from the educational point of view, but it is scarcely conceivable how any subject of practical science would have been able to bring to its aid a parallel interest or the same appropriateness.

Essentially a subject suitable to a University Course on account of its breadth and scope, it might, for that reason, be considered as outside the scope of the commercial teacher

An Ideal Subject in the Commercial Curriculum who has not had a university training. Probably most of its teachers have actually passed through the university. This, however, is not an essential qualification, provided the teacher has taken a wide and prolonged course of reading, and possesses sound studious habits. Advantageous as a university training undoubtedly is, this does not form a complete equipment for the commercial teacher of this subject. It is equally necessary that he should have a sound commercial knowledge, and, as was pertinently said at an economic conference in Scotland not long ago, "No professor of the subject should presume to stand up before an audience of business men and apply his economic theories to practical problems unless he has actually been in business or has been intimately associated with the work of a trade union." Touching, as economics does, every aspect of our social and economic life, and, therefore, of itself presenting almost boundless demands upon the teacher, it is not a small requirement to stipulate further that he should add to the wide scope thus covered the further qualification of practical business experience:

There cannot be two opinions as to the relative place of economics in the commercial curriculum: it is distinctly and essentially a subject for advanced students. Not only is there more utilitarian study waiting upon the younger student, but he has not the necessary qualifications for undertaking this subject. To introduce him to it is to court disaster, for it presupposes considerable powers of concentration, considerable powers of expression, a good command of English generally, a cultivated taste for reading, and a trained power of mental grasp and discrimination. Balance and maturity of mind are also requisite in order to approach the many problems of economics that now break into the most controversial political questions, now enter into the moral or ethical, to overflow, perhaps, into the spiritual, and then, perhaps, strike off into the apparently mercenary and selfish.

Its Place in the Curriculum

Whilst, however, economics should be deferred as late as possible in the course, it should not be so late that less than, say, two sessions of steady study can be given to it. Further, it is so important and valuable to all who are connected with commerce in any form, that it is highly desirable that as many competent commercial students as possible shall have the advantage of receiving instruction in it. Of the two evils, therefore, it is better to court the first than the second, trusting to the later discipline and experience of life to correct views and impressions upon matters that have not been adequately analysed or conceived.

The teacher of economics has particular difficulties with which to contend. These partly arise out of the nature of the subject itself and partly out of the character of the pupils. As regards the former, they include—

Some Difficulties

1. *The difficulty of establishing proof in purely logical discussions.*—So few economic facts admit of experimental demonstration or evidence, many are abstract propositions only; the result is that the personal factor—the teacher—is in danger of becoming the measure of success or failure: emphasis may be mistaken for proof independent of understanding, and restraint misunderstood as the indication of a weak or untenable theory. Inherently, logical reasoning is difficult to express, difficult to follow, and still more difficult to make convincing, for, despite precision and vigour

of presentation, people will, under such circumstances, still "have their doubts."

2. *The controversial character of many subjects which call for discussion.*—It is good, and, in general, may be taken as a sign of progress of thought and knowledge, when there are opposed schools of exponents in any subject. But such circumstances are poor satisfaction for beginners, who may be excused from asking, "If doctors disagree, who shall decide?" Unfortunately, too, many disputants, especially in questions which have a political as well as a scientific interest, are but "blind leaders of the blind."

3. *The apparent simplicity of many questions which, nevertheless, call for careful discussion and examination.*—It is not easy to convince listeners that there is matter for critical examination in subjects upon which every "man in the street" considers himself competent to express a conclusive opinion. Established opinions, in these cases, are to be expected to exist in the minds of students, and the psychological law of economy comes actively into play.

4. *The intricacy of other questions.*—Some questions in economics present examples of the most abstruse logical arguments and conceptions that any subject can offer. These questions cannot be expected to interest the average student, nor to give him any satisfaction from their discussion.

5. *Economics is, and must be, evolutionary.*—There are many unsolved questions—so often scoffed at by the cynic—and many questions whose conditions are necessarily temporary and fluctuating, that the seeming indecisiveness or even contradictoriness that results from their discussion adds to the other difficulties in no small measure.

6. *Absence of an economic "language."*—This is a well-understood difficulty. The language of economics is largely the language of the street, and, in consequence, the mind of the student is constantly working in generalities, in "popular" terms of thought, and loosely. In most sciences, "scientific terms" abound, and whatever they may present in the way of difficulty otherwise, they can easily be made precise and single in connotation, so that, once acquired, terms need no further definition or modification; economic terms, on the contrary, constantly need adjustment and definition.

As regards the students, the difficulties include—

1. *Their limited outlook on life.*—Continuation students are, usually, but early adolescents: their knowledge of social questions, of current events, of governmental machinery, and the like, is necessarily very limited, and many of these facts lie outside of their experience altogether. Accordingly, considerable information may have to be imparted before particular subjects can be discussed, thus seriously subtracting from the efficiency and scope of the lessons.

2. *Their limited knowledge in other respects.*—The most vivid illustrations fail when fundamental facts are unknown: and they lose half of their effectiveness when those facts have to be imparted. No mind is too rich to be applied to economic demonstration, but the limitations of students but too easily cause gems of thought and beauty of expression and illustration to fail in their just reward.

3. *Their limited time and power of reading.*—Students who have concurrently utilitarian as well as non-utilitarian subjects to study must necessarily give the latter second place. But economics is essentially a subject for wide and continued study, and too much reading is scarcely possible. When, further, much of that reading is of a type that constantly strains the student's capacity of comprehension, the difficulty is supreme.

As economics is not essentially a subject of practical utility, what are the objects which the teacher should have in view in teaching it to commercial students? Emphatically, not in order to pass an examination. This is one of those subjects in which an examination test has the least value; except, indeed, as some measure of the efficiency of certain aspects of the instruction examinations have no function here. There is no such thing as efficiency of the student in this case; an examination certificate cannot be of much use to him, whilst the most valuable results of the instruction are immeasurable by any examination tests.

Objects in Teaching

Foremost amongst the objects which the teacher should have in view is the "inspiration of the man." The students, so far as lies within the power of the teacher, should, when they leave the economics course, pass out as better men—better from knowledge gained, better from broadened outlook, better in balance of mind, better in mental capacity, better citizens, richer in human sympathy, ennobled.

A second object is the imparting of knowledge and understanding of economic and social problems: the one indirectly adds to commercial efficiency, and the other directly adds to efficient citizenship. Successful commercial students will rise to positions of responsibility and influence, and then there may be many aspects of their knowledge which will add directly to their efficiency and success therein. Some of the purely economic questions which are treated have a more or less direct influence on business organisation and management—so much so, in the opinion of some authorities, that economics has been boldly defined by Seager as “the social science of business,” whilst Marshall summarised his classic work and named it the *Economics of Industry*. As regards social problems, they were the outstanding mark in this generation’s progress until eclipsed by the World War; and afterwards they may be expected to become even more significant. The faded reputation of the subject of “Citizenship” may well be allowed to die if the spread of economics is thereby assisted, for economics contains the germs of a higher citizenship—a citizenship based on a scientific knowledge and understanding of both social and imperial questions.

A third object is the cultivation of mental ability and literary expression. So long as students can be kept up to the necessary pitch of mental effort, the consideration of abstract propositions and the logical analysis of facts and theories forms an instrument of mental cultivation second only to the study of mathematics; and for commercial students economics is much more compact and suitable. Its value, indeed, in this respect, commences with the first lesson and continues throughout. As regards literary value, the subject invites and disposes towards careful, forceful, and clear expression; its topics are prolific, and of such profound interest that, where suitable works can be prescribed for reading and are obtainable, students have every incentive to do as much reading as they possibly can. If, further, a discussion class, or discussion lessons, or an economics “evercircular” can be provided, the amount of positive literary training is much increased. In concluding this paragraph, it may be pointed out that there is nothing on the technological side of continuation education which can approach this subject in educative value. The reference made elsewhere to the Scotch Code, and its exhortation to Education Committees to arrange for the instruction of technological students

in English and the duties of citizenship, could find no better practical expression than in the inclusion in the ordinary technical course of a selected course in economics.

The syllabus in economics admits of a wide choice of material in the higher stage. Formal economics should not occupy too much time; true, the general principles are basic, and it is impossible for students to omit the early stage and yet obtain that scientific grasp of the subject which is necessary in order to proceed to a proper study of the wider social and industrial problems which at once form the most human, interesting, and important aspects of the subject. But it is to be remembered that the students are not students of economics *qua* economics, and, hence, they should proceed as quickly as possible to the consideration of economic problems; it will be one of the functions of the teacher in the higher stage to recall and amplify, as circumstances require, the earlier knowledge of fundamental principles. The following syllabus covers a very wide range, and selections might be necessary in the higher parts; but it indicates what a fund of important material is available—

Scope and method. Nature of an economic law. Definitions. Natural agents. Laws of increasing and diminishing return. Labour—efficiency; division of. Capital—nature and forms; law of. Organisation, direction, and mobility of labour and capital; large and small production; machinery. Localisation of industries. Barter. Value and price. Money—forms and functions; the coinage; money demand and supply; credit money; Gresham's Law. Banking and the Clearing House. Rent. Interest. Profits. Wages. Trade Unionism. Wages fund theory. Conflicts of labour and capital—arbitration, conciliation, and mediation. Co-partnership. Co-operation: economic aspects, co-operative societies and associations for co-operation. Socialism and socialistic theories. Monetary problems: deferred payment, a tabular standard, bi-metallism. The Money Market; Bank Rate; money credit, and prices. Capitalistic and industrial combinations; forms, causes, and economic services and dis-services; legislative and other influences. Theory of international trade; Free Trade and Protection; commercial federation. Functions of government; principles of taxation; State regulation of industry; State and municipal trading; public indebtedness.

Is a course in commercial and industrial history necessary to the student of economics? The "historical school" of economists would answer strongly in the affirmative, and the teachings of history are without doubt invaluable. History, properly interpreted, is crystallised human experience, and historical facts render necessary and most illuminative aid in the study of economic questions; indeed history, along with statistics, must always form the stand-by

**Relation
of History
to Economics**

of evidence and research in this subject. Nevertheless, considering the case in its relation to the commercial course, it may be stated that the bulk of students would be more profitably occupied in other directions, as, for example, in the study of language. The larger works on economics give abundant historical facts, with the advantage of authoritative selection and application, and the teacher himself can furnish just the most appropriate facts or illustrations of this nature. The student most needs a grasp of principles, and a good knowledge of these will serve his purpose without the necessity of his being able to furnish historical illustration or proof. If, then, historical study is to be introduced, it should come earlier in the course by way of an incidental portion of the English teaching, and it would then comprise the reading of a selected work of sufficient interest and bearing for its main facts to survive in students' minds until they take up economics in due course.

The teacher of economics must endeavour in every way to rise to the requirements of a great opportunity. His lessons must be carefully prepared, and he himself should be in the best physical form. Interesting and successful teaching depends very largely upon the teaching conditions, and if these are bad, the "dismal science" will likely justify the cynic's epithet. It goes almost without saying, too, that the teacher should be enthusiastic in his subject, and that he should particularly have a good delivery and felicity of expression. A further requisite is that he should be of mature age. Economics is not a mere presentation of ascertained facts or accepted theories, and any parrot repetition of these is worthless. A broad and generous outlook on life, a strong and firm judgment, mental stability, ripe knowledge of men and things—all demanding the mature teacher—are indispensable qualifications.

Remembering always that this is a scientific subject, the first characteristic of the teaching should be that which is requisite for the teaching of any science—the methods of logical definition and exposition. Premises must be stated with as much mathematical precision as possible, and the stages of the demonstration or the proof must blend, and cumulate to the due conclusion. It has already been pointed out that economics has no language of its own: it follows

(a) **Scientific
Method**

that the terms must be carefully and accurately attached to the economic idea they are intended to convey. Nicholson observes, in the Introduction to Vol. I of his *Principles*: "It is still one of the main functions of the economist to discover what ideas the words stand for, and to analyse vague and complex notions into their component elements." And he quotes from Sidgwick: "What we gain by discussing a definition is often but slightly represented in the superior fitness of the formula that we ultimately adopt; it consists chiefly in the greater clearness and fullness in which the characteristics of the matter to which the formula refers have been brought before the mind in the process of seeking it." If, therefore, as Marshall says, economic "reasonings must be expressed in language that is intelligible to the general public," it follows that when a "term is wanted to be used in any other senses" (*i.e.*, than what he calls its "leading use"), "whether broader or narrower, the change must be indicated." All which emphasises the care and circumspection with which the teacher must set out his expositions.

It is very easy for the teacher to come down to the standard of the students by—unconsciously it may be—getting their measure and accepting things as they are. This is wrong.

(b) Neither
Carelessness
nor Sophistry

Economics is not to be taught merely for the immediate. Students, even at the upper end of the commercial course, may be comparatively youthful, and they may be content with less effort and a lower standard of work, for their part, than they would if they were more mature. It is necessary, therefore, that the teacher shall set the standard and not the pupils. To that end there should be no slackening or toning down of the work as time goes on: care and precision in every stage must be maintained. Again, it is easy to take up a definite position on a controversial or undetermined matter—easier far than to try to put neutrally, and comprehensively, opposed points of view—and in that event, the teacher will be obliged to commit himself to some kind of sophistry. The writer of a recent leader in *Education* gives an excellent case in point. He says: "As we write, we are irresistibly reminded of listening to three celebrated professors, of History, Economics, and Mathematics, who unconsciously and unconcernedly demolished each other's premises and postulates while arriving at an identical

conclusion, leaving in the mind of one youthful auditor a pyrrhonism that endured for years." Two of these professors, at least, must have demonstrated sophistically, and probably they underestimated the critical capacity of their audiences.

There is always the ever-ready temptation to stray too far from the charted course in any subject, but the fecundity of many economic questions, and the many aspects of elaboration and illustration that may be given, form a particularly real and seductive danger.

(c) Nor too much Spreading

A simple question from a student, general lack of knowledge upon certain material matters, an interesting side issue, and the like, may side-track the teacher and steal the lesson. No topic of discussion should be exhausted; a fair conception is often sufficient, and the rest may be left to the student or to the chance of recurrence on some future occasion. Particularly is this applicable to the early and more formal economics, where progress is of more importance than detail.

In economics, the corollary to illustration by diagram is usually interpretation by mathematical treatment: and the mathematics requisite include geometrical and algebraic operations of a high order. It follows that diagrams of this calibre are impracticable with commercial students. But if it were otherwise, it does not

(d) How far avail of Diagrammatic Illustration ?

follow that the extensive use of diagrams would be advisable. A complex diagram can only be worked out properly by the individual himself: he must go carefully through the construction, and follow, step by step, the details of the demonstration. For class work, the diagrams must be of the simplest character and confined practically to visualising a central fact or a typical deduction. Marshall says, pointedly, "The use of diagrams requires no special knowledge, and they often express the conditions of economic life more accurately, as well as more easily, than do mathematical symbols." An investigation of his use of diagrams, however, shows that even this encouraging prospect is not realised. Most of his diagrams would be entirely impracticable in class instruction; and probably he would himself admit this as the real cause why he has made his text independent of the diagrams, and placed the whole of the latter in foot-notes. Nor is it to be overlooked that the use of diagrams is limited to a few sections of

economics only (e.g., value, price, supply and demand, monopoly, and rent). In general, the process of logical reasoning only is sufficient, and an empirical statement in the last resort, so long as true, will serve the teacher's purpose and probably be in the best interests of the class. Certainly, mathematics must be ruled out of court entirely. Quoting from Marshall once more: "The chief use of pure mathematics in economic questions seems to be in helping a person to write down quickly, shortly, and exactly, some of his thoughts for his own use . . . when a great many symbols have to be used they become laborious to anyone but the writer himself." Lastly, the standard works on economics, both English and foreign, with occasional exceptions only, do not use either mathematical or diagrammatic illustration at all.

It has already been mentioned that statistics form one of the most important aids to the progress of economic research. How far are they to be used in giving instruction?

(e) And of
Statistics?

In the general principles of economics they have comparatively no place, for the results of statistical observation are sufficiently incorporated in general statements not to require the ground to be re-traversed. When, however, the teacher comes to the application of economic reasoning and study to practical problems—and their economic character is often only one aspect of these problems—the use of statistics becomes definitely necessary. Sometimes they may take the form of tabulated figures, and at other times they are best presented in a graph. In either case, the students have not time to compile the figures for themselves from original sources and, therefore, they must be supplied by the teacher. Extremely valuable figures of a certain type are to be found in the *Board of Trade Gazette*, and as this costs only 1d. per month, advanced students should be prevailed upon to take it, at least during the course. Other statistical information must be obtained from blue books and Governmental reports direct, or indirectly they may be got from newspaper, magazine, and other extracts. If reference is made to the syllabus already given in this chapter, it will be seen that many questions relate to subjects in which change is so constant that only comparatively recent figures have any value; accordingly, the teacher must keep abreast with the times and be constantly accumulating such information. For progressive statistical facts, the graph is

essential, and the teacher's notes should contain a number of such graphs to be added to year by year or as occasion offers.

This is a subject in which students might accumulate endless notes, and, therefore, caution is necessary in this respect. Class

**Students' Notes
and Reading** notes must not form a miniature text-book, and students will, in general, be better employed in following the teacher closely and uninterruptedly

than in endeavouring to take notes. Sufficient general remarks have already been made on this point in the chapter devoted to Students' Notes, and it only needs to be urged here that a compact summary note dictated by the teacher will be the most economical and profitable record of the lesson.

With respect to reading, one at once comes to grips with the most unsatisfactory aspect of economics. There is not a subject of the curriculum which calls for such extensive and protracted reading as this does, and it may at once be admitted that commercial students are confronted with very severe limitations in this respect. The choice of a text-book is still a problem, despite the issue in recent years of a number of smaller works intended specially for commercial students. From their very nature, it follows that these smaller books can be nothing more than summaries—extended note-books. They necessarily condense too much and are unable to present really adequate discussion or real economic treatment. A few years ago the question of text-books was insurmountable; only costly and bulky works were available, but with the growth of the science itself and the wonderful expansion of public interest in economic problems, many excellent works on particular aspects, and published at popular prices, have now become available. Mention may be made of the Home University Library series published by Williams & Norgate, which contains some excellent volumes in the Social Science section; the volumes in the same section of Jack's The People's Books; and individual volumes in Collins's The Nation's Library. In addition to these there are various 2s. 6d. volumes on particular subjects to be found in the usual publishers' lists. The teacher might well take personal responsibility for imparting in his lessons the bulk of the most formal treatment of economics and, from the very beginning, adopt a selected list of the above-mentioned works for the students to buy in lieu of the more orthodox text-books. Of the older

standard books at a moderate price, the translation of Gide's *Political Economy* is still one of the best for interest and simplicity; whilst of more modern works combining compass with a fairly moderate price, Seager's *Introduction to Economics*, sold in England by Bell & Sons, is excellent. Such, however, has been the output of works in recent years that selection of one or two only for mention here is somewhat invidious, if not, indeed, dangerous.

CHAPTER XXVI

ENGLISH

If Business Practice is a subject which has suffered at the hands of its exponents, it has more than a parallel in the subject of English.

A Dog with a Bad Name

A dog with a bad name, English, as a subject of any curriculum, presents a problem as eternal as the hills, as eruptive as the plague, despite endless methods of treatment, and as seemingly incurably diseased as a man afflicted with leprosy. And the reason is almost entirely due to the tyranny of grammarians—the exponents of language teaching.

English has many bad friends, and when introduced into the commercial curriculum, it is not infrequent to find some of these bad friends cynically asking “What is *Commercial* English?” And they derisively supply their own answer, being like-minded (in Bacon’s words) to Pilate—“What is truth?” said jesting Pilate, and would not wait for an answer. Yet, instead of being an absurdity, the term “Commercial” English is extremely appropriate and significant. It incorporates a protest against the grammarians and implies a demand for the presentation of English study to commercial students in such a way that the essentials for correct and effective use of language shall be taught with the minimum of formal surroundings—otherwise of so-called “grammar.” This is exactly what a business man wants, what the man in the street wants, and what the commercial student needs. It does not follow that, this purpose served, the application of the subject in commercial education is exhausted. Far from it. On the intrinsic value of a study of English there is absolute concord: the eternal problem is as to what to teach and the best way of teaching it.

Commercial students, as already mentioned so often, are a very heterogeneous body. Classified educationally, those in large central institutions may roughly be estimated as 40 to 45 per cent. secondary school students, and 55 to 60 per cent. elementary. In other continuation schools the proportion of secondary to elementary pupils will be lower. Broadly speaking, there is not

What Commercial Students Require

a great deal of difference between these types as regards their need of instruction in "Commercial" English. In spelling there is nothing to choose, and in care, neatness, and the more mechanical requirements of written speech the secondary school students do not show to advantage. The wider scope of their education gives them an ultimate leverage, but from our present point of view it is not in operation at the time when they take up their commercial studies. If this view is correct, the necessity for some definite training is established.

Naturally, the functions of grammar are better realised by secondary school students, since these have had the great advantage of study in another language where grammatical influences are so much greater; their vocabulary power, too, may be presumed to be higher, although it is not to be expected that it is mature. Lastly, as regards the commercial requirements of vocabulary and composition, there is no material basis in either case.

First, it would be well to ask, "Has English a grammar?" Foreigners, with their more critical distinctions of moods and tenses in verbs, and their greater use of inflection, are perturbed to discover that, to them, English does not present a grammar at all. The foreigner is substantially right, although the grammarians have ruled us with a heavy hand in their efforts to impose form and rule upon us.

**What shall be
Taught?**

Still, there is some grammatical basis that should be recognised as requiring commercial students to study or revise. This centres round concord and the pronouns, punctuation, etymology, and various considerations of form in the written language. And here it may, perhaps, be pardoned if a simple rule is suggested for the insertion of the apostrophe to denote the possessive case of nouns: students so often fall foul upon this that it seems a neglected detail. The following points need to be observed by students—

1. The possessive adjectives and pronouns do not take any sign. Hence: *his, hers, its, ours, yours, theirs.*

2. Only nouns take the sign of the possessive, which is always placed after the nominative singular when the use is singular, and after the nominative plural when the use is plural. Thus—

(a) *Singular*.—Boy, cherry, man, people (collective singular),

and, therefore, the possessives are, boy's, cherry's, man's, people's respectively.

(b) *Plural*.—Boys, cherries, men, peoples, and, therefore, the possessives are, boys', cherries', men's, peoples', respectively.

3. Composite names like those of institutions may be variously written, but where the sense is dative rather than genitive there is no sign (e.g., The Home for Waifs and Strays would become "The Waifs and Strays Home"). Conversely, "The Working Men's Club" is genitive—The Club of Working Men.

No teacher of English should be without *Grammar and Its Reasons*, published by the Publishers of this book, for it is an invaluable work. Neither should he fail to read *Cobbett's English Grammar*, published by Ward, Lock & Co. at 1s., for, although this little book is now a century old, and, as a grammar, utterly antiquated, yet its language is such a model of patient, careful, and exact statement of grammatical explanations that it is unsurpassed. These explanations are of the type that should be given in making grammatical explanations to commercial or other adolescent pupils. The following is a quotation—

Who, which becomes *whose* in the possessive case, and *whom* in the objective case, is, in its use, confined to rational beings; for though some writers do say "the country *whose* fertility is great," and the like, it is not correct. We must say "the country, the fertility of *which*." But if we *personify*—if, for instance, we call a nation a *she*, or the sun a *he*, we must, then, if we have need of relative pronouns, take these, or the word *that* which is a relative applicable to rational as well as irrational and even inanimate beings.

Cobbett's decisiveness, too, is refreshing and cuts gordian knots which too many grammarians evade or leave unravelled. For example, on this very point of "*whose*," four grammars give respectively the following statements—

No. 1. *Who*, *whom*, and *whose* are used only of rational beings; *which* of irrational; *that* may stand for nouns of any kind. In poetry, *whose* may be used for *of which*.

No. 2. The possessive case of *who* is still in use, though rarely employed except in poetry, as: "The question *whose* solution I require" (Dryden), "I could a tale unfold, *whose* lightest word," etc. (Shakespeare); "The roof; *whose* thickness was not vengeance proof" (Byron).

No. 3. *Whose* now used as the possessive of *who*, was originally an interrogative of all genders. It is now very rare in the neuter, except in poetry, and even then it is chiefly used when objects are personified. Some grammarians, however, give it as the possessive of *which* as well as of *who*.

No. 4. In an earlier age, however, *whose* and *whom* were used in relation to things as well as to persons, and there is a tendency in modern English

to restore this earlier usage in the case of *whose*, as: "The glorious elevations on *whose* tops the sun kindles harmonies of light." *Whose* has always been freely used in poetry to refer to things.

In the face of such prohibitions, permissions, and fencings, one might almost feel forced to the determination to let grammar "go hang," and to decide to do as one pleased. Such grammar is certainly not the kind which should be introduced into Commercial English, but, of course, fine questions of construction and controversial points like the above may arise at any time.

There is much to be said in favour of the inclusion in the English work of some literary reading and study. Contrasted with the day school period, the age of junior commercial

(b) **Literature** students is more than ever favourable towards the chances of securing good and enduring results;

and in proportion to the time spent, the results will be very much greater. Here, however, as always, the question of time is the crux. If English is combined with business practice in the first and second years of the course, much direct class work is not possible—the English must be either incidental or applied; it cannot to any adequate extent include literature. Home reading—if it can be secured—with some brief class direction, will all be to the good, and may serve to an even unexpected extent the object in view. But there is an obvious element of dubiety—if it can be secured a happy consummation has been attained. It would, however, be much more hopeful if the subject were made a substantial feature in the preliminary commercial course.

What form of literature would be most valuable? Without doubt, pure literature is educationally most to be desired, but, looking to the commercial course as a whole and studying both its defects and its requirements, room should certainly be first found for historical and geographical reading of a literary character. The teacher must be left to decide in each particular case.

Constructive work in English is most important of all. It is towards its application to practical business requirements that the English work must lead, for, as with shorthand and book-keeping, there is a bread-and-butter aspect that may not be overlooked, however ill

(c) **Constructive Work**

it may consort with the more sublime. Probably no teacher is in a position to realise the working deficiencies of students in this respect so adequately and patently as is the teacher of typewriting.

Any application of handwriting allows the writer to avoid so many pitfalls and points of doubt that lack of knowledge and erroneous ideas may escape detection and correction for long periods; there is no surer detector or better corrective instrument to practical faults in English than is yielded by typewriting. It has all the plainness of print without the aid of space adjustment: there is no half-way house in punctuating, paragraphing, word division, placing of the apostrophe, compounding words, capitalisation. Breaches of form are glaring in typewritten characters; in handwriting they are disguisable in many ingenious ways.

But constructive work in English is only seen in one of its aspects when mere written forms are considered; there is the more direct English side to be considered, and this is ultimately of vital importance. Not even the reporter more urgently needs to write promptly, forcefully, discreetly, and to the point than the business worker. Every constructive error tells and has a more or less intrinsic measurement in business practice. Undue emphasis, ambiguity, suppression, exuberance, pointlessness, ineffectiveness, and the like, all produce a harvest of trouble, worry, and potential pecuniary loss. Constructive English is the most valuable of all aspects of English teaching, and must receive abundant exercise and attention. In the commercial course, constructive English comprises—

1. Power of expression.
2. Word and structure analysis developed in a critical degree.
3. Readiness and versatility.
4. Literary grace.
5. Accuracy of written form.

It then becomes a practical question how to secure these. Power of expression can only come through a combination of vocabulary power with vocabulary use. Vocabulary power is not obtained by isolated word study. Range power with word understanding is only to be got through wide reading and constant exercise of the vocabulary as it is acquired. Words, like muscles, atrophy for lack of renewal and exercise. To become one's own, words must receive thought—thought in reception and thought in application. Only a constant requisition to read and to write will fix words and build the groundwork of expression.

Word and structure analysis—ascertaining the colour and shade of the individual word and the blends and contrasts and iridescent

colourings of words when connected—are requisite in a superlative degree in order that language use may be effective. It is not every commercial student who will be called upon to allure purchasers through the medium of a mailing campaign, but every business letter contributes to or subtracts from the volume of business done: it sells or it loses, for there is no neutral position in business correspondence. And the same applies in, perhaps, a somewhat different bearing, to all other business documents—specifications, reports, summaries, returns, and the hundred and one purposes for which the written and spoken word is required.

Time is money, and time is fleeting. Readiness adds as much to business efficiency, to working power, as any other single attribute that can be named. Laboured expression and halting utterance mean lost time, lost energy, inefficiency; whilst versatility—word resourcefulness—is important in order to give freshness and vigour to routine requirements and resourcefulness in emergency.

And then, literary grace. It is like the fragrance of June. The receiver of the graceful message derives a pleasure like to the inhalation of a perfume. It bespeaks ignorance of business to say that business correspondence to-day lacks in literary grace. One meets with the master hand again and again; unfortunately, there is all too much slipshod mercenariness, too much degradation of a beautiful art, too much blunting of a delicate instrument. And it is as much to be charged to the lack of English training as it is to the strenuous nature of business requirements. What has disappeared from business life is the dispensable—the elegant verbosity of a past age. Tabloid expressiveness does not preclude literary grace, but, in order that literary grace shall be accorded, the craftsman must have the quintessence of literary skill.

The revulsion which has taken place against formal grammar has resulted in a demand for the entire abolition of grammatical lessons and for the substitution of opportunist instruction. It is urged and insisted that grammar, so far as requisite, shall only be taught as the corrective instrument to perpetrated fault.

**When and How
to Teach
the Grammar** This, surely, will not stand examination. It is against all principles of teaching to allow error, much less to emphasise it. Every exercise of a thing fixes it more firmly in the mind: that is to say, makes correction doubly difficult. A child who has burnt himself

has had the most effective demonstration of the painfulness of burning, but as a working means of teaching children the danger of fire, the method of experience is impracticable. To make the analogy approximate to the teaching of grammar, one would have to burn with cynicism, offend with ridicule, and the like—as impossible as the process of teaching the danger of fire by actual personal injury. In nothing is the old adage—"A stitch in time saves nine"—to be disregarded, and in teaching there is constant need of its application. Fortuitous methods are uneducational and wasteful. "Anticipate and prevent" are the right mottoes, not "wait and see." Accordingly, such matters of grammar as are at any time likely to become necessary should all be anticipated and made part of an actual scheme of instruction. It does not follow that all the grammar requisite shall be taught consecutively and not concurrently. But, certainly, constructive work should not be given in English whilst any essential grammatical instruction remains ungiven. Variety and progress can be obtained by making literary study concurrent with grammar. By all means reduce the formal grammar to its minimum, but give it and that early: get it done, and let all succeeding occasions for reference to it be reinforcing opportunities. Plainly, then, let it be said that the grammar, despite the revolutionaries, comes first, and during this time let it be foremost.

And how is the grammar to be taught? First, by self-acquisition of grammar. The teacher must be really interested in English—as a corollary it will then follow that he will be, or will become, full of it, speaking upon it with authority and power. To such a teacher, grammar will be interesting: he will make it a study. His teaching will reflect his interest—his lessons will be thoroughly prepared, and the selection of lesson subjects and material will be expertly chosen. The problem of English disappears under these conditions, and the subject takes an important place in the curriculum alongside any other language.

Speaking of the teaching of grammar, however, under less favourable conditions—under the conditions where a teacher has neither more nor less interest in English than in any other subject—it may be said that this will follow the lines of general scientific method. The subject to be considered will be properly defined so that the object in view is understood; analytical or synthetical

exposition, as the case may be, will follow; application of the rule or facts will be made so as to give clearness and fixity; finally, practice—written or oral, or both—will clinch the teaching by compelling independent exercise and application of the knowledge gained.

To direct the study of literature well and successfully, the teacher should be cast in the mould : therein will lie salvation, and observations on the work are not necessary for such as he. Even if the literature studied is comprised of works in geography or history rather than Shakespeare or Tennyson or Addison, love of the thing puts the teaching on a higher plane, befitting the work.

Study of Literature

The aims of the study must be clearly defined, for method depends upon this. What, then, are they to be ? Brutal word ! the first aim must be *utilitarian* : what of grace can be added is so much redemption. Thus, there must be—

1. *Understanding*.—Word meanings, sentence meaning, subject comprehension.

2. *Absorption*.—Knowledge gained, mind enlargement, incidental construction and spelling.

3. *Appreciation*.—Home study and preparation, reading aloud, memorising or familiarising by adequate re-reading where there is beauty or grace.

4. *Exercise*.—Discussion, criticism, written composition, dictation.

These are aims that will call for no small amount of time, and it will be a matter for careful determination as to ways and means. Regard must constantly be had to other subjects in the course, not least to the conflict of those which are of more direct business application. Methods of economy are essential, and comprise such matters as selection of parts for careful treatment, rapid traversing or deletion of other parts, and supplying by the teacher (as against preparation by students) of word meanings. Half the lesson period will not be too little for this part of the English work, and it will include discussion, reading, dictation, explanation, and study directions. With respect to the suggestion to memorise, this, of course, may be impossible owing to the nature of the matter studied or the limitation upon students' time. Approximately, the same advantage can be gained by having a selected piece of matter read once or twice at each of a number of consecutive class

meetings, each such re-reading taking only a very few minutes. It would be desirable, should the book studied not be of a type suitable for this purpose, to have some selections of pure literature to be read to the whole class by individual students or by the teacher—it being presumed that with other requirements to meet, the students would not be able to procure their own copies.

If under this head is to be included the teaching of correspondence, the work cannot be properly performed by any teacher who has

**Teaching
of Constructive
English**

not had some business experience; if, therefore, the teacher of the English class is an academic, as distinguished from a practical man, then, assuredly, correspondence must be left alone—it

will be understood to be the function of the teacher of business practice or commerce. Other constructive work will comprise essay writing, descriptive or subject writing upon a topic previously read in the literary work, précis, and any other practical work of which circumstances will admit, such as reconstructions of phrases, re-writing of a piece of matter with a change of tense or person or number, etc. Most of this will be set for homework, although any matters which admit of rapid execution and easy correction or other supervision may, as circumstances permit, comprise class work.

CHAPTER XXVII

LAW

It is not infrequently asked what the commercial institution can do with such a subject as law. The prevalent idea is that it is a professional subject only, and that its knowledge,

What Law ? as well as its practice, is the prerogative of the legal profession. In addition, there is the further idea that a layman cannot be competent to discuss the subject to any useful extent. To those acquainted with commercial education, these contentions are fanciful; the functions and necessity of law in the commercial course do not admit of debate.

It is, however, very pertinent to ask what law shall be taken. And the answer lies in the recognition of what is required by a business man. Does he require the knowledge in order to dispense with the services of a professional man? Certainly not. The practical occasions upon which a layman can perform legal services for himself are negligible, and the more he knows of law, the more promptly will he recognise when he should call in professional services. Like as with a disease, the worst legal cases are those in which resort to expert services has been too long neglected, and one of the really valuable results of some study of law is the ability to take the "step in time which saves nine." A still more valuable result which should be obtained is the knowledge which shall prevent the follies that only ignorance can commit. It is always to be remembered that knowledge of the law is presumed, and although this must necessarily but too often be a harsh presumption, nevertheless, it is the only logical—the only possible—position which can be taken up in legal administration. In certain cases, the business man can, if he choose, obtain direct benefit from his knowledge, as in enforcing debt in a county court; but even here the business man will oftener prefer to leave the matter to professional hands.

Not only is the business man, like any other layman, presumed to know the law, but there is now so much law that directly concerns him, and such extension of the functions of Government

into the domains of industry and commerce continues to take place, that more than the ordinary "presumption" applies to him. His business is very materially affected by legal enactments, and it behoves him to have some substantial knowledge of these in order to maintain a reasonable line of safety. The question, therefore, of "What law?" is sufficiently defined, in the first instance, by the answer "That knowledge of law which will enable a business man to comply with direct legal enactments affecting his business, and which will guide him in other matters in such a way that he will, on the one hand avoid offence, and, on the other, take the precaution of defence or protection at the right time."

The need having arisen for knowledge of a certain kind upon legal matters, a body of matter has been compiled to which the general term "Commercial Law" has been **Commercial Law** applied. There being no such law specifically, the contents of the term "Commercial Law" are, necessarily, elastic; but they have been sufficiently defined by the contents of the special compilations which have been made to serve as text-books. In general, the scope may be taken to include "contract," together with special forms of contract dealing with relationships involved in the sale of goods and the general conduct of commercial affairs. Beyond this, there is an indefinite scope for useful instruction, tending to become specialised for particular requirements as the course of work extends.

One of the commonest of specialised sections in law is the law relating to Joint Stock Companies. So important and wide-reaching are the operations of these companies **Company Law** that it may be laid down that it is more than desirable that the study of commercial law shall include some study of company law. Similarly desirable is a knowledge of partnership—usually, however, included under the special forms of contracts dealt with under "commercial" law—and of bankruptcy. The commercial student, fortified with a suitable grounding in these various matters cannot but make a better equipped business man, and, so far as this knowledge goes, one fit for a responsible position, since normal affairs, in their legal aspects, will be safe in his hands.

And yet, something further may well be required of the commercial course in law. True, it is not yet general to carry this

subject much further, if, indeed, so far, as already suggested; but the line should be drawn, rather, at what *ought* to be done if the work is to be adequately done, than at what is *usually* done. Because of the professional nature of legal practice, the scope of commercial law seldom, if ever, comprises a knowledge of the machinery of legal administration. This is unfortunate. Much general knowledge of this kind may be said to be necessary even for the man in the street, but when a serious attempt is made to teach some legal principles and applications, a general knowledge of legal administration is most desirable, if not essential, as a preliminary to the more technical knowledge. Commercial law will undoubtedly be better understood when the system of courts and administrators and other practical relationship to governmental machinery are properly realised. Still further. There is a body of most necessary knowledge represented in those more everyday relations in which business men, as well as other people, stand, such as a general knowledge upon the law of landlord and tenant, of master and servant, and of evidence. The total knowledge thus represented is very substantial, but is also so very useful that it is undoubtedly extremely desirable.

The place of law in the commercial course does not need to be elaborately discussed: it is undoubtedly towards the end. Bearing in mind, however, the possible scope which may be given to it under generous provisions for its teaching, it may be begun as early as it is possible to introduce it consistently with the prosecution of the more fundamental subjects which all students should undertake, and with due recognition of the somewhat exacting character of the subject itself. Incidentally, it may be said that if the organisation of the course will admit, the lessons in this subject should not be too long: a one-hour lesson is quite sufficient under ordinary conditions.

Both in scope and in character, law is a special subject. It calls for a wide range of knowledge and for the constant pursuit of changing factors. Principles of law are constantly receiving fresh definition—by extension and by restriction—in consequence of judgments in the courts, enactment of fresh legislation, repeal of old

Something Further

Place in the Commercial Course

The Teacher

legislation, and other causes, that it is characteristically a subject of flux. All changed matters are important because they become forthwith or duly operative and render antiquated knowledge not only valueless but actually injurious. This might be taken to signify a necessity for a professional man to act as teacher. Undoubtedly, such a man would bring to bear a knowledge and experience that no other teacher could; but this does not establish a case. Where classes are arranged to include legal students proper, the necessity for a legal man to act as teacher is established; not otherwise. Of course, if such a man can be obtained to undertake the work and to take the necessary trouble and thought to enable him to act as a teacher as well as an expert, so much the better. But the subject by no means precludes the ordinary commercial teacher who chooses to make the necessary specialisation. Teaching ability is like salesmanship to goods—it goes a long way towards success.

Unlike economics, law is a subject with its own technical vocabulary. These terms, on account of the extreme diversity of the circumstances under and to which the subject
Teaching matter of law is applied, are constantly under analysis. On the one hand, this results in an extreme comprehensiveness, and, on the other, in the most minute distinctions.

In no inconsiderable degree, therefore, the comprehension of law is a comprehension of terms. In that comprehension, the faculty of analysis, of minute dissection, is an
 (a) **Analysis of Terms is Fundamental** essential factor. The mind, therefore, which cannot think logically and analytically is mis-applied if it turns itself to law, and, likewise, the mind that can only grasp the finite and conclusive will equally fail. For example, Anson, after defining the nature of obligation, proceeds to analyse it, entering upon the discussion with the significant words: "Its characteristics seem to be these." Of course, there is a limit to this analysis of terms; the teaching of commercial law cannot pass into the province of jurisprudence. Nevertheless, the first requisite of teaching is a careful and adequate discussion of terms. Intention, extension, and exclusion are all of the utmost importance, and the teacher must neither hurry discussion nor simplify it too much so as to create a specious rigidity

and comprehensiveness of view which, in fact, it is impossible to obtain. Nor are set definitions to be too readily given. If the discussion is adequate, the students will themselves be the last persons to desire precise definitions.

This faculty of analysis of terms is largely the faculty which is almost universally regarded as the "legal mind." The teacher

(b) Analysis of Circumstances

should possess this faculty, and, naturally, can acquire it more or less by suitable study. It is also necessary that, in so far as it is possible, the same faculty shall be cultivated in the students. An extension of this faculty is seen in the proper consideration of the circumstances which constitute any particular case or problem or example of legal application. What are the facts of law which apply or are implied? Is this or that reconcilable with existing circumstances, with accepted constructions of law, with those or some other facts, and the like? Questions like these have to be constantly put, considered, and concluded upon positively, negatively, presumptively, reservedly, and so on. Illustrations and application of legal facts should always be presented in this judicial or critical manner. Neither a positive nor a negative is of any value, however correct the one or the other may actually be, unless this analytical treatment has been applied in conveying the decision. Students must, as far as possible, be taught to analyse all the circumstances—to make comparisons, to draw distinctions, to seize upon essentials, and to reject irrelevancies.

In teaching the law of contract, reference to original sources of the law are inapplicable even when statute law applies. On the

(c) Original Sources

other hand, in dealing with negotiable instruments, valuable reference may be made direct to the Bills of Exchange Act, 1882, and, in fact, such reference may be regarded as almost essential. It is not to be assumed that students are competent, or need, to go deeply into any statute. As an element, however, in teaching method, this practice of original reference is extremely valuable when used with discretion and due limitation.

The function of case law in teaching is twofold. In the first place, it is often equivalent to reference to original sources. In the second place, it affords both teacher and student invaluable lessons in the analysis and application of existing law. Provided,

therefore, that the details are not too abstruse, a careful consideration of selected examples forms an excellent teaching aid. Merely, however, to refer to a case simply as

(d) **Use of Cases** book and line evidence is worthless, however necessary it may be to quote chapter and verse in legal practice; the conditions in the two cases have no analogy. Case law, therefore, is only good for teaching purposes so long as it directs thoughtful consideration and aids analysis.

The successful teaching of law depends very much also upon fecundity and felicity of illustration. Reference to cases gives authoritative illustration, and, if the precaution

(e) **Illustration** is taken to avoid too much detail, cases are to be regarded as excellent material for illustrative purposes. Seeing, however, that, on the one hand, cases have a special value as defining the law upon the subjects with which they deal, and, on the other hand, bearing in mind that illustrations often only require to be used as another form of expressing what has already been given in a general way, it would seem that if the teacher cultivates the power to put a principle or point concretely by means of a supposed application, he will usually effect his purpose quite well. Such a power is well worth cultivation and, provided due caution is observed against committing error, the method may be freely used and will add concreteness and definition to many otherwise vague or abstract discussions. In the course of time, the traditional formula "A, B, C," and "X, Y, Z," will suffice for these illustrations, but in the earlier lessons it would be well not to use them exclusively but to alternate them with actual names; students more easily think in language than in a formula.

It is but too easy to make the students' note-books into miniature text-books. This is wrong, and altogether mistakes the purpose of the instruction, apart from the fact that, as a

Students' Notes teaching method, it is utterly bad. The main function of notes is the epitomising of leading facts and principles: they are not a substitute for text-book study, but, rather, a preparation enabling it to be more satisfactorily undertaken. The normal text-book contains as much matter on the whole as is requisite, and it is only where a particular point is not adequately treated in the text that detailed notes are at all necessary. Tabulation within limits is a very useful form of note,

but this kind of information is best compiled by the student himself as a homework exercise, fortified by such previous guidance in method as the teacher may deem necessary.

Much or wide reading is not necessary. The practical value of the student's knowledge lies in a comprehension of guiding principles plus a certain amount of exact know-

Reading ledge upon material facts. Manipulation of the material and its concrete application to the ordinary aspects of business requirements are the main practical points to be kept in view. The other extreme, however, is to be avoided (*i.e.*, neglect of the text-book). Students should, without doubt, read their text-book well, and some of the homework questions should be so framed as to require them to do this, as, for example, classifying and arranging matter just in the same way as if a note were being made of it.

The teacher is undoubtedly at a great disadvantage in his own readings if he is unable to translate from the Latin the various terms and phrases he will meet with. It is another

Latin Terms matter, however, to introduce these terms and phrases into the teaching. Essential as they would be to law students, they are quite unnecessary for commercial students. Very common terms like *caveat emptor*, *uberrimae fidei*, and *in transitu* may be used, and a translation given without further comment; but *obiter dicta*, like *nemo dat quod non habet* and *ignorantia juris neminem excusat*, are entirely unnecessary and should be avoided; plain English is quite sufficient, and no amount of spurious explanation of the Latin will give any result at all worth the while.

CHAPTER XXVIII

SHORTHAND

It is not within the scope of this work to discuss shorthand systems comparatively. Suffice it that there are in existence a number of systems, and that from the educational point of view, a treatise on the art and practice of teaching must necessarily deal both with the general principles of instruction which must underlie all teaching, and with the place and function of each subject in the curriculum. This chapter, therefore, deals with shorthand in general.

Shorthand Systems

It is not so very long ago that, for most practical purposes, shorthand was synonymous with the commercial curriculum, or, at least, shorthand and book-keeping together were. Fortunately for commercial education—for teachers and taught—those days are past, and indispensable as shorthand is and always must be, it is neither the curriculum nor the top dog; it is now performing its right function as an integral and essential part of all commercial education, and it allows due space for other subjects to come in.

Place of Shorthand in the Curriculum

Shorthand of itself is a subject worth while to anyone, whether training for commercial life or otherwise; to the commercial man it is at all times valuable, as an accomplishment which aids despatch, and, what is equally important, enables verbatim notes to be made of matters the specific terms of which are necessary to be noted. Commercial students are, as regards 95 per cent. of their number, destined to enter the ranks of workers as distinguished from employers; and it is as a working instrument that shorthand is essential to them. With it they are on a higher plane of efficiency than without it, quite apart from any question of their needing it for the purposes of taking dictated correspondence.

Shorthand is an educational subject of the highest value. For what does it do? *Inter alia*, it—

An Educational Subject

1. Calls for persevering effort without being so formidable that it requires exceptional ability.

The key to success is largely persevering care.

2. Requires the application of judgment with discrimination and decision: in this respect it is exceptionally valuable, since many subjects which call for discretion rather emphasise deliberation, and, to that extent, lean to the stimulation of a too general weakness—the habit of indecision.

3. Trains hand and eye. Shorthand characters and their combinations require to be accurately formed and accurately read. Whatever licence an expert can take, with either character formation or *ad sensum* translation, he must always and ever maintain a certain standard of specific accuracy; he cannot deteriorate in efficiency of either hand or eye beyond a comparatively limited degree.

4. Increases mentality. One of the educational advantages of algebraic study is the value of the mental training given by the constant use of symbolic expression. Mathematical symbols are a new language, and although their laws of combination are entirely different to those of shorthand, and are of a higher order, they are not superior as an instrument of general application. Rather are they mental food for the mathematical mind and caviare to the general. Shorthand is neither too abstruse to be comprehended by ordinary intelligence nor too simple not to serve the purposes of mental training to those of exceptional ability. When the student proceeds to speed writing, and particularly to high speed writing, there is a mental training that no other subject of human knowledge can present, for there is no parallel.

5. Aids language study. There are no purposes of writing which cover the scope that the study of shorthand does. The number of words written, the variety of matter utilised, the work of translation, are all language features of shorthand of a highly valuable order. Much as shorthand may have a phonetic basis, the writer must always rely upon a certain kind of exact comprehension, or the effort to write soon becomes too exhausting: in actual fact, however, shorthand writers can continue for indefinitely long periods of time.

Speaking for the moment in a general educational sense, and not with special regard to the commercial curriculum, the study of shorthand should not, even under favourable conditions, commence earlier than about 12 years of age, whilst, normally 14 or 15 is abundantly early. It could be made of value

even if introduced much earlier, but that would be at the sacrifice of itself as a subject. For, whatever educational value it has it is, after all, a practical subject, and in use it applies to the whole language; it is better for **When should Shorthand as a Study Commence ?** shorthand that there should be no "primer stage," as there is in the learning of a language by children. They are not able to understand a wide range of vocabulary, and, hence, educational studies of a character more suited to the early years of school life are necessary.

Shorthand has been advocated as an instrument for the early study of language; the point of view is wrong, and the examples of shorthand successes attained by young people who have misapplied their energies in studying it at 8 or 9 years of age are rather matters for regret than for admiration. Shorthand has some generic characteristics which it is desirable to recognise, and to bear in mind when teaching.

All shorthand systems are based on arbitrary symbols. There is no affinity between symbols and sounds; any symbol might as well do for one sound as for another. In actual fact, the inventors of the various systems have, no doubt, given the most careful thought and experiment to the selection and appropriation of the symbols which they have respectively incorporated in their systems, but such consideration and selection have, however, not been based upon any relationship of the chosen symbol to the sound it represents.

(a) Arbitrariness The one guiding principle in the selection and allocation of symbols has been mechanical convenience. The objects essentially to be secured in any system comprise—

(b) Mechanical Considerations have Ruled

1. *Brevity of symbols.*—Shorthand is necessarily brief writing; this prime function is dominating and is expressed in the generic name.

2. *Simplicity of symbols.*—Brevity is a factor in simplicity of symbols, but is not the only one. A brief symbol may be comparatively intricate, as the sign of the natural in music and the symbol of variation in algebra.

3. *Simplicity of synthesis.*—An arbitrary symbol for each separate word is inconceivable, and, hence, shorthand characters are required to be combined. Constructibility, therefore, is of fundamental

importance; complexities of construction make for indecision, waste of manipulative effort, and impediment generally.

4. *Compactness*.—Two outstanding requisites govern the final selection and allocation of symbols—vertical and lateral compactness when combined. Joined symbols may neither rise too high nor fall too low, travel too far forward nor regress too far.

5. *Horizontal progression*.—Similarly, joined characters must oftenest progress forward—to the right. Backward motion means double travel of the hand—two steps merely to get back to the starting-point.

6. *Facility of synthesis*.—Combinations of symbols must be facile: tortuousness is fatal in itself, but when, in addition, there are combinations which though comparatively simple in themselves yet require special care or deliberation, an essential requirement of combinability is lacking.

7. *Legibility*.—The arbitrary characters have to be read (*i.e.*, transcribed into normal writing or translated into spoken language). Legibility is, therefore, essential, but this legibility is secondary in one respect—speed in reading is secondary to speed in writing, important as both are. Deliberation in writing is fatal; deliberation in reading merely inconvenient.

8. *Facile symbols for fecund sounds*.—So far as possible, the most facile symbols represent the most frequently recurring sounds; this, naturally, is a consummation closely affecting the efficiency of the particular system. In the same way, fecund combinations of sounds call for facile symbols or combinations of symbols.

9. *Limitation of arbitrariness*.—Whilst the initial selection and appropriation of symbols must necessarily be arbitrary, subsequent manipulation of these materials, for the purposes of the particular system, must be as logical and consistent as possible, for these qualities are necessary to dexterity. Hence, every consideration should be given to reduce to a minimum the further introduction of the purely arbitrary. This does not prevent the employment of special devices for particular purposes, but, as a natural conservation of energy, such further arbitrariness must be applied in circumstances which, by constant repetition, make the arbitrariness to disappear in familiarity. Constructiveness must, therefore, specially attach to the occasional; arbitrariness to the frequent or familiar.

10. *Consistency secondary when conflicting with mechanical considerations.*—Both in the learning and practice of a system, consistency which makes for harmony is one of the prime factors in dexterity. Nevertheless, consistency is secondary to mechanical considerations when these conflict. The permutations and combinations of sounds are practically infinite, and until science can discover an affinity between sound and symbols—if such exists—no arbitrary selection of symbols can possibly suit an infinite variety of conditions. Serious incompatibilities must necessarily attach to any selection of symbols, and in one system these will be of one character and in another of another character. Nor are comparisons of systems in this respect very fruitful: they may interest and even guide inventors, but they can only be made after substantial mastery of each system, and the energy thus dissipated might conceivably be better spent in the study of perfecting the system in hand. For teachers, it is a waste of time—systems must necessarily be conformed to by their practitioners and exponents, and all the most elaborate investigations are, in this respect, entirely worthless.

In some cases systems are proprietary and do not admit of independent variation. There is not necessarily anything injurious in this, for it must fundamentally be to the interest of any system to make itself as efficient as possible. In any case, the mere stereotyping process of printing fixes each system, and departures from the standard form would almost certainly be unwise if not disastrous. Even without the covering security of copyright, it would be essential that there should be some authoritative party to decide upon changes: regulation means order and efficiency; licence, disaster. As well have independent views and methods in the writing of music or of mathematics; for, whilst inter-communication in shorthand is of less importance in practice than inter-communication in music and mathematics, it is sufficiently requisite to demand uniformity, not least for the process of instruction.

Just as there are certain characteristic requirements in the successful teaching of a science, so there are in the proper teaching of an art. All shorthand systems are, from the teaching point of view, typically arts, and the methods of instruction must be those essential to an art.

(c) **Systems
are Binding**

**Principles
and Methods
of Instruction**

It is a prime requisite that the teacher must know the system which he seeks to expound. A little knowledge is proverbially a dangerous thing, but in an art like shorthand, where there is so much synthesis on the one hand and so much adaptation to practical requirements on the other, a little knowledge is dishonest and injurious. There is a debatable question as to the degree of practical dexterity which a teacher should acquire as a minimum qualification, the point of difference being as to whether or not a teacher's proficiency should be coincident with that of a practitioner's. The view is urged that, just as a teacher must have a more precise and authoritative knowledge of the theory of the system than the practitioner requires, since he must expound as well as understand it, so the practitioner requires a greater practical dexterity than does the teacher. Since this matter is debatable, it follows that it contains a margin of indifference, or at least of less decisive importance; a minimum requirement may be indicated as "an average practical proficiency," but this only carries the contention to the point that average practical proficiency qualifies the teacher for average teaching requirements. Expertness is above and beyond an "average," and the teacher of average proficiency is, obviously, not a proficient exponent of what is requisite for the expert. When the pupil outstrips the master, their relationships are those of collaborators; the teacher's function becomes not that of instructor but, at best, that of counsellor and friend, and at worst, that of a mere dictator; the pupil henceforth is self-taught. High speed writing presents entirely different experiences to those given in an earlier stage of speed acquirement. In the lower stages, mental and mechanical facility of manipulation are to be acquired only; they are mere aspects of familiarity to be gained by practice. But in high speed writing, resourcefulness based upon intensive study is requisite; the practitioner is not subject to the system but is master of it to mould and adapt it to himself and his personality.

The points of view of the proprietor of a shorthand system and of the teacher are not necessarily identical. The presentation of the system is rather the assembling of its principles into a subjective grouping. To this end, the ramifications of a principle are presented complete and the rules are expressed so as to

convey them in a clear and understandable form without oral explanation. In grouping and manipulating rules for teaching purposes, the teacher needs to sub-divide, to

**(b) He must
Analyse its Rules
from the
Teaching
Standpoint**

enlarge, to compare, to contrast, to interweave, to re-arrange, and above all, to present in various terms of expression so that they shall appeal to all types of mind. Text-book formulation of rules

may always at some stage or other, form one of such presentations, but they can never be the one exclusive form. Their essence is tabloid or concentrative, whilst the requisite of teaching form is first and foremost assimilative—digestion, not nourishment, is the great requisite.

There are many aspects of a rule which competent knowledge can illustrate and present in a way that a written rule cannot.

**(c) Illustrating
Freely and
Methodically**

This is the teacher's special function. He knows the shades and aspects which unfold in application; the little manipulations in execution that make for freedom, good formation, and practicability;

the cautions and limitations that are to be observed; the emphasis that one aspect bears as compared with another; and so on. Again, the illustrations should be both abundant and methodical. Indiscriminate illustration is ineffective: it fixes nothing and tends to confuse. Methodical illustration—like to like with appropriate employment of contrast and differentiation—ensures comprehension and assimilation; and abundance makes for facility.

The teacher must not, of course, do all the work; the students must themselves devise and execute. In the first instance, it will

**(d) With the
like Exercise**

probably be more helpful if the teacher dictates his own exercise, following the lines of the illustrations he has given. He will then, at some distance

behind the pupils, place the outlines upon the blackboard for the students to correct from. Afterwards the text exercise may be utilised, thus supplementing the teacher's selection of illustrative types. As in the demonstration, similarity with due recourse to contrast is the test of good exercise development.

Promiscuousness is not a teaching device—it is fundamentally a test. Hence, promiscuousness is only to be resorted to at certain stages of progress. It spreads effort and, if resorted to too early or in too frequent sequence, it confuses instead of aids. Of

course, the ultimate requirement is ability to write the system freely and under all conditions: hence, the promiscuous exercise constantly approaches the actual. This approach, however, should cumulate and not crush: its range should be carefully defined, stage by stage, as the study of the system progresses. In a less important degree, the promiscuous exercise is revisionary; proper revision, however, should usually be directed by the teacher, who will combine exercise with explanation and direction, so that its great danger shall be avoided, viz., its temptation to "plunging" and a consequent emphasis (owing to the spur of necessity) of bad and inaccurate forms, as well as of correct ones.

e) **Promiscuous Exercises at Due Intervals**

It is as necessary that students should read and transcribe as that they should write. A distinction is very necessary between reading and transcribing for accuracy and for fluency. Yet one is as important as the other, and since printed reading exercises are limited, in that they are not readily obtained by students in addition to the text-book in use, the teacher should specially conserve his energies and those of his class in this respect by writing his exercises and illustrations on the blackboard, and after they have served their prime purpose, running them over again promiscuously by pointing out individual forms for collective or other naming by the class. This revision of blackboard exercises expands the amount of reading exercise enormously during the course of instruction, and its value should be adequately esteemed. Incidentally, it will expose the teacher's writing and keep him up to standard; slight imperfections of execution pass unnoticed at the moment of actual writing, but when, a few minutes later, they are revised in the re-reading process, by the observation of a whole class, the teacher will find the occasion prove more critical than he could have realised by following the practice of removing written work without this revision.

f) **Both Reading and Transcription**

Transcription performs a like service to the student—it checks his forms and reveals to him imperfections of execution. The main function, as always, is, of course, acquisition of the transcribing faculty. As a mere teaching expedient, its value is as great as that of writing, for it is analytic instead of constructive, and analysis must always go along with synthesis as an instrument of learning.

Dictation is a valuable instrument in shorthand teaching. Its function, after the theory has been gained, is the acquisition of speed (*i.e.*, dexterity). But during the learning

(g) **Dictation** period, dictation is an invaluable instrument for teaching purposes. In writing from the printed word, the student has no stimulus to decision and promptitude. The object of the written exercise is, of course, accuracy of the shorthand form: that is primal. At the same time the student will unconsciously dally, will tend to become hesitating even when he is correct, and, in general, will acquire by over-emphasis excessive deliberation. This mental sluggishness should not be allowed to grow during the whole period of learning: it must be counteracted, and dictation is the obvious antidote. It is not that any attempt at speed need be made: the conditions are sufficiently stimulative in themselves, for the student does not know how soon the next word is coming along, and he necessarily endeavours to keep abreast. If he dally too long, the dictation of a succeeding word spurs him to commit himself to a decision.

Another aspect of dictation is the exclusive reference to the ear. In writing from longhand exercises, the student uses the eye very largely, even though writing phonetically; in practice, shorthand is written mainly from auditory reception and not from visual. Dictation, therefore, approaches always the real requirements of practice. The matter for this dictation should preferably be exercise matter already studied. Dictation, like promiscuous exercises, is not an instrument of instruction: it is primarily an instrument of test. New matter, therefore, is inappropriate, except in so far as it is really easily within the power of the students to write; if it presents difficulties, it is a subject for exercise work and not for practice or test. The misuse of dictation, therefore, must be guarded against or it will act as an instrument of disservice, undoing the instruction already given. Readiness and flexibility are the objects to be aimed at—readiness of mind and flexibility of execution; constructiveness is a secondary matter whose appropriate place mainly is (a) in exercises during the learning stage, and (b) in preparation during the speed stage.

Commencement of speed writing marks the critical stage of shorthand knowledge. It is important to analyse the components of what may be termed “the speed faculty.” It comprises—

1. *Memory*.—Instant recall of outlines and forms that have been either memorised or otherwise studied in the past.

2. *Constructive power*.—The ability to improvise
(h) *Speed* shorthand forms spontaneously, and to apply principles and rules of a more or less general character to particular cases; both factors to be applied under imperative conditions of urgency.

3. *Manipulative skill*.—The ability to execute the shorthand forms with rapidity, accuracy, and sustaining power. Hesitation is fatal, bad outlines are illegible or are misread, and spurts are useless. Manipulative skill, sustained in effort and in efficiency, is the requisite.

4. *Craftsmanship*.—Over and above mere mechanical manipulation, there should be present the marks of the craftsman—the man who does his job “cunningly” (*i.e.*, with that superiority of method and procedure which distinguishes the master workman from the apprentice and the inefficient journeyman).

It is the teacher's function to train these factors. The order in which they have been named is intended to indicate that of their relative importance. With respect to memory, it is to be observed that where it is effective it is one of the most rapid and least exhausting exercises. Rapidity is exactly the most pressing requisite at the moment of writing, and the power which gives this requisite in its maximum degree is, therefore, a most important one. What is meant by memory? It includes the unhesitating recall of symbols and forms which have been the subject matter of a learning-by-heart process, together with the recall of forms which, though not having been specifically committed to memory, have, nevertheless, been the subject of special attention by practice and repetition. This power of remembering must be cultivated in students from the earliest beginnings of their studies.

Constructive power, whilst being of a higher order, is usually of a much lower efficiency than memory power. Yet it is extremely important, for it is the instrument for effecting a written record of the spoken word which has not been previously written, or, if previously written, has not been remembered. It is always requisite to some degree—it is impossible to forearm students against every requirement and even simple words may indefinitely escape being written by particular students. As the student's

practice grows, the power of constructivity undoubtedly increases, but at the same time the need of it constantly diminishes as writing becomes more and more an act of spontaneous recollection. Speed practice is not a good instrument for cultivating this power: its conditions being those of urgency and pressure, it does not give time for selection. Hence, really difficult new matter—a relative term varying in accordance with the student's knowledge and progress—should be the subject of a more deliberate effort than speed writing affords, and, hence, should be prepared by previous study. The teacher may “go through it” with the students first, or they may study it independently. Copying and study, therefore, are exercises which should be continued into the speed stage and maintained indefinitely. Not only does this make for better shorthand writing, but it constantly hands over to memory selected forms or outlines, and it acts as a corrective to the deteriorating effect upon mechanical excellence which speed work always tends to exert.

Manipulative skill is partly comprised in dexterity, partly in sustaining power, and partly in penmanship. Penmanship, *per se*, should be cultivated from the very commencement of shorthand study, and the teacher should insist upon it on every possible occasion. Now and again, when, through constant insistence, students tend to let the effort to produce good penmanship pass to the stage of proving a definite hindrance to their speed—and they will do this at times—they should for a brief while be required to throw it to the winds. Thus, a piece of matter may be required to be taken down at a speed above that which the students should be writing and every effort should be required to be made to “get it down.” The occasions are rather psychological than otherwise, and the teacher should recognise them when they occur. The commoner evil, of course, is the tendency to excessive deterioration of the written characters.

Craftsmanship is rather the manifestation of the individual personality than a subject of training. Students will, therefore, develop this in very varying degrees, but the teacher may inculcate many little practical points by observation of students when actually taking down, and also by drawing upon his own experience for illustrations.

Speed training is one of the most difficult parts of the teacher's

task. Where the organisation of shorthand is on such a scale that the teacher of the speed classes is not also responsible for the theoretical instruction, occasions of difficulty and delicacy arise. Students will come forward who are unfit for this stage, and it then becomes the teacher's duty to insist that such cases shall go back for further study in theory. It is impossible to make creditable, or even successful, speed writers out of inadequately prepared students. At the same time, there will be many degrees of knowledge which do not call for the rejection of students from the speed stage, but which, nevertheless, call for assistance in theoretical matters. The teacher should regularly inspect students' notes and see for himself what is necessary; whilst he should also call attention to theoretical points when furnishing shorthand forms for difficult or strange words, and support the explanation by adding further illustrative examples, the students copying them down as the teacher gives them. In this way, too, much help will be possible in cultivating constructive and memorial power.

Reading and transcription have already been mentioned as being co-important with writing during the theory stage. They are, if possible, of still greater importance in the speed stage, partly because of their greater practical necessity and partly because with more writing practice students tend to develop an aversion to reading and transcription. The teacher will, therefore, impose the necessary corrective in as varied forms as he can, and not least in requiring some full written transcripts to be handed in at regular periods.

How far should the teacher act as whip in urging students on to higher speeds? In general, he will not require to do this, as students only too often need to be checked against constantly attempting to write at speeds which they cannot do properly. Still, the greater the students' dependence on the class for their speed practice, the greater the teacher's control and the greater his responsibility for deciding the rate of progress to higher speeds. Effort should always be maintained towards a greater speed so that students do not contract hesitating or too deliberate habits; but the margin of competency should not be unduly forced.

Some General Observations

Students of shorthand encounter various difficulties incidental to the subject. Amongst these are—

1. Conflict of forms and signs—they get confused between one and another.

2. Memorising of the matters necessary to be learned.
3. Formation of characters and combinations.
4. Acquisition of the necessary skill in penmanship.

To help them to overcome these, the teacher must devise methods specially directed to that end. Thus, frequent assembly of groups of characters—writing them and having them written when new matters of theory are going to be applied to them, having them re-written when the new theory has been taught, and so on—will gradually eradicate the conflict of particular forms; whilst students should also be made to help themselves by making a note of those things which give them trouble, and regularly copying and re-copying examples during a period. The success of the students' memorising will largely be in proportion to the teacher's insistence and effort: he must group, revise, refer to at every possible opportunity, and test regularly. With a persistent teacher, students will maintain the necessary effort to commit to memory. With respect to character and combination formations, the teacher should have definite penmanship exercises, being himself careful to show the trifling details of manipulation, and to take them up individually with the weakest students. Penmanship exercises are secured by repetition of forms, the copying from printed and blackboard outlines which can serve as a model, and the like.

Is it the province of the shorthand teacher to look after that constant bugbear—students' spelling? It is the province of the teacher of any commercial subject to assist in this way, but owing to the pressure of examiners in shorthand examinations, this subject seems to be singled out as much as any for mulcting students who spell unsatisfactorily. This is unfair to the shorthand teacher. The contention that badly-spelled transcripts are valueless begs the whole question. Bad spelling but too often arises from unfamiliarity with the mis-spelled words, and the shorthand teacher is not responsible for limited vocabulary. But even when it is due to inability to spell comparatively familiar words the case is not a bit the better justification for mulcting the shorthand teacher. It is undoubtedly heterodox, but it is strongly urged that spellong should not be counted decisively in a shorthand examination. The remedy for bad spelling is to institute a proper examination and certify students who have passed in it. It is a detail whether this examination should comprise English or be an English

examination with an adequate test in spelling as an essential part. The following example is taken from an actual examination test, and it is to be observed that there are only three errors due to faults in the shorthand, whilst spelling and grammar account for the remaining fourteen—

*Dear Friend,*¹

Your letter of the 24th instant as given me the opportunity of expressing my opinion on a subject, about which I am² very desided view.³ I think you will agree with me, that it is a great mistake for people to be working hard all the⁴ round and during that time deprive themselves of pleasures and in many cases common luckshirus for the sake of saving money to be spent within a week when they take their holidays. This sisterm seems to be very common in the industrial districts of Lancashire and Yorkshire. Such a practise does very little if any good. The idear is to go to the seeseid and eat and drink, in a manner which is not at all good for health, and to spend a⁵ time in a way that weekens rather than strenthans, and then to return home with little or no money to begin the years work again. It is a great pity that people cannot be more temperate at holiday times, and take care of their hard earned savings.

Another paper in the same examination contained only the following errors: *aggree, with in, there holidays, practise, years* (i.e., the shorthand, as such, was perfect).

As in all other subjects, homework is a great factor in shorthand progress. Where classes meet only once a week in this subject,

homework is not only important in itself but it

Homework needs special attention. In the earlier stages of study, homework should comprise penmanship exercises, memorisation of necessary matter, copying and transcribing from exercises in shorthand, and writing in shorthand from longhand matter. The last-named type of exercise must be carefully selected with a view to its being within the capacity of all students to perform it as correctly as possible: it should not, therefore, present too many difficulties. The process of deliberate

¹ "Fred"—"friend" was in agreement with the shorthand note.

² "hold"—"I am" was in agreement with the shorthand note.

³ "views."

⁴ "year" is omitted here, but appeared correctly in the shorthand note.

⁵ "the"—"a" appeared in the shorthand note.

study of outlines is necessary and good, but it is not to be forgotten that it emphasises errors as well as good forms and perpetuates mischief in proportion. If there is doubt, therefore, as to whether a particular exercise may be expected to be well done or not if set for homework, it should be withheld and another one substituted. Shorthand is not a subject in which the solution of difficulties ranks as a commendable form of exercise: accuracy and facility outweigh all other considerations.

A valuable use of homework for speed students lies in making it the instrument for securing transcripts and the study of outlines. An exercise of both kinds should be regularly set, and, if possible, every student should possess a shorthand dictionary for reference, and be encouraged to refer to it frequently; it can scarcely be abused, for, let it be said again, the shorthand student may depend upon memory most, and his subject needs accuracy and facility above all else. As much use as possible should be made of class correction of homework, as the intervals between successive class meetings post-date corrections for too long a period; this is particularly important in the earlier stages of study.

CHAPTER XXIX

TYPEWRITING

SHORTHAND, book-keeping, and typewriting constitute a (if not *the*) most important trio of subjects in the commercial curriculum.

A most Important Trio

Practical business work cannot move a step without them, and whenever any business question is to be undertaken, one or more of these services forms an indispensable instrument. Their functions and value may be illustrated by one of the discoveries of the war—the discovery that in the ultimate those services which most minister to direct physical needs are the services which most matter. Thus, the war has seen one occupation after another forsaken for its labour power to become transformed from the intellectual to the physically and mechanically useful. Shorthand, book-keeping, and typewriting fulfil parallel functions in practical commerce: they are the handmaidens who discharge fundamental services without which the intellectual and superior services are largely helpless. It is not necessary to press the point, but reference to it is necessary here in view of a pronounced tendency at the present time to decry them in educational circles; their prime importance, even above all other subjects, needs to be emphasised. Sufficient has been said already upon two of these subjects; the last now calls for consideration.

Typewriting is the commercial Cinderella. The simile is not without a close parallel, for it is regarded both by some teachers of other subjects and by officials and inspectors as a thing of insignificance—a mere mechanical subject that has no claim whatever to be regarded as an integral part of the commercial curriculum, much less as a subject of educational value. This contempt may have been partly created because of the difficulty which has been experienced in building up an adequate theory in the subject, and partly also by the unsatisfactory way in which its teaching has been developed; this has been a misfortune both for the subject itself and for commercial education generally. So strong has predudice grown that to speak ill of typewriting has become educational cant. It is to

be heartily hoped that those most interested in it as a subject of commercial education will endeavour to redeem it; the first step in this direction is to raise the standard of instruction.

Taking the lowest plane of estimation, however, for the moment, and supposing that typewriting is a mechanical subject; what of

**Taking the
Lowest Plane
for a moment,
however**

that? So is telegraphy, whether wire or wireless.

Typewriting is an art that conserves and increases working power. If it is inefficiently done—if it is wasteful of materials for lack of skill, or wasteful of time from the same cause—it is an added cost in production, and a waste that needs to be stopped as much as any other wasteful expenditure. Too many business men accept incapacity in their typists because they have not enough work to keep them employed full time, and, accordingly, accept the most patent waste with equanimity; others accept inferior work because they are themselves indifferent, looking merely to the purpose of the work and to nothing beyond. It may safely be said that in England to-day half the commercial expenditure on typewriting could be saved if the standard of workmanship were raised—saved in machines, materials, and wages. The typewriting industry, with its adjuncts, is now a very large one and absorbs an enormous capital; an excessive proportion of its cost to production is chargeable to the waste due to the inefficiency of the typist.

Typewriting is capable of becoming an instrument in practical business education such that no other subject can serve in its place.

**And now
going Higher**

Via typewriting, the most common and extensive parts of practical office routine can be taught, and taught through it only. Combining many of the functions of the printer, the typist adds his own proof-reading—and the higher work of proof-reading is not unimportant in its educational requirements. The efficient typist adds to the working capacity of the business executive as the motor-car adds so enormously to the effective capacity of the doctor.

The place of typewriting in the curriculum is as near the beginning as possible. It gives working knowledge to students who need

**Place in the
Curriculum**

to apply it very early in their business career, and, properly taught, it gives them a practical business capacity that reflects in increased efficiency in all their work.

Unfortunately, however, from the point of view of organisation, typewriting is an expensive subject to equip; practically speaking, it is also the only subject of the curriculum that wants expensive working materials. This question of cost has probably had a considerable effect in bringing so much criticism against typewriting; it takes up educational funds that are more than begrudged—funds that are resented. Hence, it is usually not possible to organise the curriculum so that typewriting shall take its proper place, and it has to be relegated to an inferior or a later one. This results in the cost being largely transferred from education to industry, as has already been pointed out.

It is highly desirable that the period of typewriting study should be as fruitful and as compact as possible; so much requires to be done in the commercial course that, in common with arithmetic, English, and business methods, typewriting should be dropped as early as possible in order to make way for the higher subjects of commercial education. Nevertheless, it is a greater evil to prejudice the efficiency of its teaching than it is to delay or even to exclude some of the higher work; commercial education stands to gain enormously by an extension of the period of commercial training.

The first essential in the teaching of typewriting is an adequate machine equipment, for typewriting is essentially a subject to be organised upon strictly business lines. The equipment should be both efficient and sufficient, and it should be used adequately so as to get out of it a satisfactory amount of skilled product. Machines should be kept as much up to date as possible, and as soon as particular machines or models become "old"—say, every five or six years—they should be disposed of and new machines substituted. This method will be found as cheap as any, and, of course, if the equipment can be kept still newer, so much the better. The teacher should be competent to keep the machines in general order, but they should be overhauled by a mechanic at least once a year; and, in addition, there will be occasional repairs for which a mechanic will be necessary.

It is a mistake to include a wide variety of machines in the equipment. The organisation can be much more effective if two or three types of machine only are represented; the teaching can

be better; and the equipment is more easily kept in full employment. If, therefore, machines representing the double keyboard, the one-shift single keyboard, and the double-shift single keyboard—one make of each kind—are adopted, there will be a quite satisfactory variety. The number of machines of each variety depends upon the number of students, but the principle *one machine to one student during the whole time of practice* should be rigidly adhered to. If this cannot be arranged otherwise than by a restriction in the number of students, then that course should be firmly adopted, as against the alternative of admitting to any lesson more students than the total number of machines.

The amount of other equipment depends in the first place upon the organisation: this is referred to below. In the second place, it depends upon the syllabus. Generally speaking, **Other Equipment** there should be one or more hand duplicators, one rotary duplicator, press copying apparatus—press, well and brush, and a copying bath—some representative filing appliances, and various accessories such as paper, materials, and punches.

The organisation of the typewriting classes is generally the most difficult part of the organisation of the commercial course. On the one hand, the rule should be inflexible that **Organisation** there shall be no students in the classroom “waiting a turn”: on the other hand, the equipment should be as fully employed as possible, so that there shall be no waiting machines. Again, students can only attend at certain times, on account of being occupied with other classes; and in the same connection the necessary time for homework in the various subjects must be considered, so that students shall not be allowed to attend for more than a certain number of evenings per week. Reference to this last point has been made in the chapter on “The Commercial Course.” Again, it is desirable that, so far as possible, students shall not attend promiscuously: beginners should attend together, intermediate students together, and advanced students likewise.

It is to the interests of the students, as well as conducive to the efficiency of the organisation if a strict allocation of machines is made. The machines should be numbered consecutively in a prominent place, and each student should have a definite number

allocated to him; under normal conditions, the question as to the make of machine which particular students are to use does not arise with beginners—one make is as good as another for them. So far as convenient, a choice may be allowed them in the first instance, with the reservation that if the machines do not pan out so as to give each student his choice of make, then an allocation shall be made to him by the teacher, which decision he must accept. In higher classes, the same general rule should prevail, but consideration should be given to students who, for office reasons, desire a particular kind of machine. *It is a mistake for students to be allowed to change the kind of their machine until they have become proficient upon one*—and then they will probably not wish to use another kind. The teaching should make sufficient provision for the ordinary ins-and-outs of the mechanism of the other machines to be generally known by the students; then, if at any time practical requirements necessitate taking up another kind of machine, they will know what to look for and where, in so far as the class equipment goes. Choice and change of machines is given far too much prominence, as witness the following announcement, taken from a prospectus: “Each student will receive instruction on the seven different makes of machine that are available.” This invitation to “confusion worse confounded” is not only fudge, but it is evidence of bad organisation: no equipment should have “seven different makes of machine” until the typewriting classroom discards its functions and becomes a museum.

The covering and storage of the machines is a point of some importance in the organisation. It is better to discard the metal covers which are normally supplied with the machines, and to substitute cloth caps, numbered to correspond with the machine numbering and made to fit fairly well according to the particular type. Usually, the machines require to be put into cupboards or otherwise stored when not in use, and in this event they should have definite numbered positions duly labelled on the shelves, so that the requisite order and care can be observed in their handling. Where it is possible to leave the machines on the practice tables, the table positions should be numbered in a similar way; and, indeed, it makes for good order and convenience if the tables have numbered positions in any event. Another important point in the classroom organisation is the seating. Stools of a suitable size are

necessary, and makeshift seating should be avoided. Ordinary school desks are, of course, an impossible arrangement, and where provision of a more permanent character is not available, trestles of a suitable height and firmness should be provided. In exceptional cases, it may be possible to provide proper typists' desks, but this is too ideal to expect in equipping for a subject of such an unenviable reputation as typewriting.

The lighting of the room—both natural and artificial—should receive due attention. It is highly desirable that a proper amount of light should fall upon each typing position, preferably from the high rear. Darkness and shadows make for bad operation and inculcate bad habits.

The general care of the equipment should be the teacher's responsibility. This will include the oiling and general oversight of the machines and the care of the various details of apparatus, as well as responsibility for the discharge by students of their share of the work. The latter, as regards machine mechanism, should only comprise type cleaning; and where the machines have to be removed, students should be made responsible for taking them from and returning them to the storage positions. Too much work of this kind should not be imposed on students, or they will lose a disproportionate amount of practice, as well as be tempted to evade the tasks; at the same time, the position of the teacher should be protected—his function is to teach and not to be a menial. Caretakers should not usually have any responsibility for machine handling.

A factor of importance in securing efficiency is the proper care and preservation of students' papers and materials. As a business training factor alone, this matter is one that requires proper organisation. Every sheet of work, after correction and assessment by the teacher, should be preserved, and should be producible by the student as and when required. An efficient means to this end is to have file boxes, all numbered and labelled, with an allocated shelf position for each. In this way, any student in a hundred can find his materials in a moment, and replace them with like expedition, whilst at any lesson the students attending for practice can enter the room and be at work in a couple of minutes. The same result is obtained by having a numbered pigeon-hole or rack allocated to each student. In this case, a binder, or other form

of file, is desirable in which to retain marked papers in chronological order: and, of course, the same arrangement for holding completed work can be applied along with the use of the file box for loose materials, as mentioned above. This filing arrangement means additional equipment; if, on account of expense, it is unobtainable as institution-provided apparatus, then an effort should be made—and will succeed with little trouble—to get the students to provide themselves, the teacher merely indicating the kind of thing necessary, so that there shall be the requisite uniformity of appearance when the materials are put away in their respective places. It should be added that the most satisfactory method of storing is to place the holders or boxes on end and not flat or in drawers; with a large total body of students, certainty and promptitude in finding materials can only be effected in this way.

These considerations are all important matters in the organisation and may be summarised—

1. One student, one machine.
2. Fixed time of attendance for each student.
3. Definite, allocated numbered machine to each student, and no changes.
4. No mixing of stages if avoidable.
5. Only a limited number of makes of machines in the equipment: say three or less, according to the total number to be provided. The general ins-and-outs of mechanism of the selected types may be taught to all students if the arrangements permit.
6. Discard metal covers for cloth caps over machines.
7. Number machines, cloth caps, storage, and (preferably) working positions, all with corresponding numbers.
8. Seating is most important—especially as regards height—whilst working tables or benches should be firm.
9. Natural and artificial light should, if possible, fall from the high rear.
10. The teacher should take responsibility for the equipment, but students should move machines when required and keep the type clean.
11. Students' work and materials should be kept in numbered holders, filed in allocated positions correspondingly numbered.

It makes for the redemption of typewriting if a regular lesson in theory (or a demonstration) is time-tabled. In no other way

can the teacher really teach the subject. A half-hour lesson of this kind each week would have incalculably good results; the author carried out this plan for years, but with an hour's scheduled lesson for each stage. Unfortunately, the suggestion is still too novel, and the subject matter for such lessons is somewhat more limited in scope than in most subjects, so that teachers would find the half-hour lesson probably more efficient until they had obtained some experience in preparing and delivering such lessons. In order to illustrate this point specially, notes of a lesson on a typewriting subject will be found in the chapter on "Lesson Preparation," and in the chapter on "Records of Work" a half-session's record is shown. If typewriting teachers will welcome this suggestion and endeavour to do their best to secure arrangements, they will contribute to the efficiency of their own work; they will help to raise the status of typewriting; and they will find an enthusiasm and satisfaction in their students that will of itself be a sufficient reward. The periodical assembly of all the students of each stage that this arrangement requires, constitutes a time-table difficulty that is by no means insurmountable, and the disadvantages of a large class for this lesson—which is probable in Stage I—are considerable although they should not prejudice its institution. Lesson subjects may comprise—

**The Redemption
of Typewriting**

1. Blackboard, oral, and written exercises in key location and in fingering.
2. Talks and illustrations respecting machine mechanism and operation, with the why and wherefore, time being taken to analyse, and to ascertain experimentally the advantages and disadvantages, etc., under various circumstances, thus giving something of a critical or expert aspect to these matters.
3. Discussion of principles and methods of executing various kinds of work, and, in particular, the discussion of practical details that make for artistic work, and for competency in the typist. Such discussions should be aimed at inculcating skill and right conceptions of typewriting as craftsmanship—a subject with a real technique—and, therefore, worthy of careful study.
4. Consideration of various matters of practical English that so peculiarly become exposed in typewriting. Oral and written exercises can be added,

5. Lessons on technical knowledge and on certain matters of business practice that specially affect the typist's work.

6. Lessons, demonstrations, and, as far as possible, practice in various manifolding, duplicating, and other processes, including filing.

7. Discussion and arrangement of all practical work before execution, with comments and corrections afterwards. Return of marked work to students.

After a time, the teacher's difficulty will rather be what matters to abridge or reject, than what to include; the practical work will be doubled in efficiency; and a hundred matters which could never be dealt with individually can be properly considered in the half-hour's talk. In matters of practical business, the value of the theory lesson is only limited by the teacher's own limitations.

The syllabus of work should be carefully drawn up in detail: typewriting is a subject in which it is only too easy to "jog along"

without a set scheme, the teacher merely following

Syllabus some general sequence of exercises. The teacher should work out a definite scheme of development

of the lessons and arrange a suitable gradation of exercises to which all students should be required to conform. The usual examination syllabuses are useless for practical teaching; they are what they are—merely examination syllabuses—and even as such, may be open to considerable criticism. Excellently thought-out schemes of instruction and arrangements of exercises, are frequently to be found in the organisation of this subject in private institutions; on the other hand, it is only too common in public institutions for the utmost haphazard methods to be adopted, or even no methods at all worth the name. The corollary to a proper scheme of work is unity of practice in the practice lessons. Students in continuation classes are not received at all times—or should not be—and, hence, they should all start scratch at their respective stages. The weekly work handed in by first stage students should be uniform, except for the greater degree of completeness in the work of the more expert. The amount of matter set should be sufficient for everyone to be fully employed, but there should be no over-stepping. Such regularity and control can only arise out of a properly arranged scheme of work.

All exercises should have a definite purpose. Mere gradation in some sort of developing order of difficulty is only a stage better than complete promiscuousness; it is not an efficient

Exercises arrangement, and, in fact, bespeaks incompetency in the teacher. An exercise is not just something to be worked: merely an occupation. It should be a study, or a portion of applied technique, or a test of skill, or a piece of training, or an exercise for cultivating dexterity, or otherwise fulfil some designed function. At all stages of progress there will always be some or all of these requirements to be kept in view. Most of them require to be carried on concurrently, and, hence, long exercises, involving one type of matter, are entirely unsuitable. Each week's or other periodical portion of exercises should be composed of two, three, or more kinds, each kind carrying forward the scheme of instruction. Neither all practical business exercises nor all theoretical exercises should be selected; and, in particular, those curses of exercises—past examination questions—should be tabooed. Examination papers are tests pure and simple; not instruments of teaching, and when students reach the stage of being able to work them, they are ready to go on to something better and more instructive; just prior to an examination, let a test of this kind be given by all means if the teacher desires, but that is quite a different proposition to introducing them into the scheme of instruction. All worked exercises should be handed in to the teacher immediately at the close of the lesson, for his marking and assessment, and no work should be allowed to be executed except such as set (or permitted upon rare occasions). A watchful control should be extended over students in order to prevent waste of materials—whether the student's or not—and, hence, all work attempted should be required to be handed in, whatever its state, or its stage of completion. It is never to be forgotten that this is a practical subject and should be run upon the principle of effecting a maximum of real business training.

Where no provision is made for a theoretical lesson, very little in the way of real instruction can be done by the teacher; particularly after the earlier lessons. The teacher

Teaching must largely be a mere "overlooker," question-answerer, and machine adjuster. And seeing that this is usually all the teaching opportunity afforded to the teacher,

it is not surprising that the subject should have a bad name. Even an earnest and enthusiastic teacher will feel discouraged with such conditions, realising that he is caged and clipped. Under conditions of this kind, the best that the teacher can do is to mark the exercises conscientiously, note common difficulties and errors, and take a few precious moments from the practical work for collective correction and explanation. It is to be observed that the attempt to do this involves a repetition at each class meeting, say for the week; the dribblets of time thus taken will amount to more than a set theoretical lesson would involve, and be much less satisfactory in results, because both teacher and students are conscious and resentful of the time thus subtracted from practical work. Under these conditions, only a very few points can ever be covered, and those only in the most meagre and perfunctory manner. This cannot be called a teaching method at all.

The most prominent question which arises in the mind of most teachers is as to the method of operation ; sight or touch—which shall be adopted ? For normal continuation instruction, there can be no question that the touch system is impossible in its commonly understood form: and it is doubtful whether a modification of it can be safely followed. The total number of hours comprised in the session's course is the ruling factor, and the teacher cannot wisely do other than adopt the sight method.

This, however, does not mean that he cannot do much to help his students to attain dexterity. The alphabet keys may even be covered if the teacher wishes, and the reduced value of sight thus effected be all the more readily permitted. In this case, the keys should be covered with distinctive coverings—say, red gummed paper for left-hand first fingering, white for right-hand first fingering, and so on. In addition, collective and individual exercising of students in keyboard memorisation is possible, and will have excellent results: indeed, this kind of exercise should be applied whatever method is adopted. In keyboard memorisation, it is to be borne in mind that both lateral and vertical memorisation is necessary, and that the latter, being detached into ten sections or scales, is necessarily a more troublesome task, and, therefore, needs more effort and persistence than the former,

(a) Sight or
Touch ?

(b) Key
Memorisation

A second question that commonly arises is that of fingering. The coloured coverings referred to above form a remarkably helpful aid to good fingering, and even where the

(c) **Fingering** teacher feels unable to adopt the covering up of the key character, the aid of coloured transparent coverings is to be highly recommended—or the equivalent method of coloured coverings marked with the corresponding key character. The old method of figured fingerings to exercises is worthless. As regards the number of fingers to be used, the superiority of the four-finger method is unquestionable, and a beginner can as well learn to follow this as an inferior one; it is not worth while to labour students who have previously adopted any other, but since fingering is a main factor in accuracy, it is a matter that must have the most careful attention. It may be added that key coverings made of paper should be of a soft character like blotting paper, or they will not hold: they should also be cut smaller than the keys.

Fingering, however, is only an aspect of the general question of operation. The teacher should look vigorously after all methods —maintenance of the hands over the keyboard, carriage return, key and space-bar operation, etc.—and cut out all waste or bad motions.

(d) **General Operation**

It is impossible to deal much with machine mechanism unless collective instruction can be given, and even then a good deal more time is required than might be supposed.

(e) **Machine Mechanism**

It is certainly desirable—if not actually necessary—that students should be able to effect all normal attentions, and be able to make an intelligent investigation as to the character of the trouble in more than normal difficulties. The teacher will need to decide how far he can go in these matters. Desirable as it is that students should be able to effect all necessary ribbon adjustments, and the like, it calls for a strong sense of duty on the part of the teacher to allow the necessary practice in effecting such adjustments, for it is impossible to avoid being caused a great deal of personal trouble in making good the faults committed by students. It is not unreasonable for the teacher to defer most of this instruction until the students have attained some proficiency; and, indeed, there is more than a justification for the adoption of this course. What is ultimately to be aimed at is to make the

student able to dispense, in practical office work, with the aid of a mechanic except for really essential purposes.

An efficient training cannot be given unless students perform various kinds of practical work besides machine operation. Press copying, carbon copying, duplicating, filing, are all important matters, and students will not be able to perform them without instruction. Questions of time, opportunity, and materials arise, and are usually so serious that this work is largely left undone. For the like reasons, there are far too many teachers who are unable to get the requisite practice themselves, and who, therefore, have not the necessary knowledge, essential as such knowledge is. Teachers should make every sacrifice to overcome these difficulties and seek for opportunities of doing so.

(f) **Other
Practical
Operations**

all important matters, and students will not be able to perform them without instruction. Questions of time, opportunity, and materials arise,

To what extent should technical work form part of the instruction? What is regarded as "advanced" work is, in practice, almost exclusively confined to technical documents, although there is quite a lot of other matters which are as important. In the first

(g) **Technical
Work**

place, it is a question of the teacher's knowledge. Much shoddy teaching characterises this so-called advanced work, chiefly because there are so few means of teachers themselves acquiring adequate knowledge. Unless the teacher has had training or other means of obtaining really practical knowledge on these matters, it is better not to include them in the teaching. Should the teacher have no option in the matter, then, in the absence of proper knowledge, he should confine his work to the ordinary text-book examples until such time as, by opportunity and accumulation of documents, he can obtain a more extended acquaintance with them. Thus, for example, until he has seen a number of actual specifications of various kinds, the teacher cannot possibly appreciate the character of these documents, nor realise the necessity for students to do more than merely copy a page of exercise work when studying such matters. For the like reason, the teaching should be illustrated by actual specimens—unfortunately, almost an impossibility to many teachers to acquire.

It is desirable that students should provide themselves with a text-book: without it, the teacher will be obliged to provide "copies" as exercise matter, with all the inconvenience and unsatisfactoriness

of so doing. A text-book makes for orderly progress and study, increases the sense of responsibility in the students, and forms a work of reference that should have practical value.

Text-book Students should also be made acquainted with the booklets published by the Typewriter Companies, giving information upon machines and mechanism. It is further desirable that students should become acquainted with prices of paper and typewriter sundries.

CHAPTER XXX

LANGUAGES

WHILST "a nation of shopkeepers" might have comparatively little need of languages for business purposes, a nation of commercial and industrial interests, such as those of Great Britain, may be presumed to have a very great need of them, seeing that its trade is world-wide. Doubtless this is the case, although statistics—which, in this case, would be of very great value and interest—are unobtainable, and the question of the importance of languages can, therefore, be dealt with only in general terms.

Some Aspects of their Importance

It is not always the apparently obvious that is true, and it is probably much less true than would be supposed, to assume that there is a general need of languages for commercial purposes. Whilst it is relatively useless to debate the question in the absence of statistical facts, it may be pointed out that the application of language knowledge in mercantile affairs in Britain is largely in the hands of mature business men, aided chiefly by a select body of correspondence clerks. Abroad, British interests are represented by a large number of foreign agents with a greater or less backing of Englishmen of, say, 25 years of age and upwards. It is quite erroneous to suppose that even in the busiest shipping office or foreign mercantile house here, foreign languages resound like a Babel of tongues; here, as elsewhere, only the correspondence department speaks—or, better, writes—in alien tongues. In an educational sense, the inclusion of a foreign language in the curriculum is very desirable, since it presents educative factors of great value. The commercial and the educational requirements, however, are quite distinct: in the former case, composition and conversation are of prime importance; in the latter, they are merely important as instruments of instruction, the literary value of the study being the main factor.

Language teaching has only one function in the commercial course under present conditions—the function of turning out *linguists*. Dilettantism has no place; and educational training is the province of the schools. It is nothing less than calamitous

that language teaching in the commercial course is so often organised on educational lines and not on commercial. The usual arrangement is for students all and sundre to be combined in the same classes, along with genuine commercial students—dilettantists, maiden ladies seeking culture, ex-secondary school students desiring to “keep up,” say, their French, matriculation students, and mistaken individuals who don’t know what to study or how to study. If this mixed un-commercial lot is to receive instruction under the scheme of continuation education—and it is not suggested that they should not—it is vitally necessary, in the interests of *commercial* education, that they should be segregated entirely from the commercial language classes. This point cannot be urged too strongly: its neglect in the past has killed commercial language teaching, and its continued neglect will operate in the same malignant way. *Commercial language instruction must be organised on intensive commercial lines, the teaching being specific, concentrated, and exacting, with the one object of effecting efficiency in the shortest possible time and with practical application all the time.* The one class meeting per week for a short session each year may suit the literary students and the dabblers; it is dishonest waste when applied to commercial classes.

The disabilities under which English students labour in seeking to acquire a knowledge of foreign languages are quite inadequately recognised. It has been asserted that English people have no capacity for acquiring languages. **Some Inadequately Recognised Facts** The statement is ridiculous. Language study demands no special faculties so distinguished from others that they can in one case take the form of national capacity and in another constitute national incapacity: such a view is grotesque. *As regards English people, the real fact is that their disabilities are enormous—voilà tout !*

In a general way, the disadvantages of our insularity are recognised and admitted, but it is doubtful whether its full significance is realised. The geographical circumstances of
(a) Insularity v. Continentalism continental countries make physical boundaries to be mere lines of demarcation—marked on maps definitely enough; but in fact, and in peace time, little more than a regular system of significantly marked posts, with or without

the presence of officials and sentries. In actual fact, people commingle with comparative freedom in the border districts. Again, political considerations have altogether ruled in fixing national boundaries—physical and even ethnological considerations have been cast aside. The result has been that within the national boundaries very composite elements may be found, sometimes resulting from political conquest, as witness the typical case of Poland; and sometimes from mere contiguity and freedom, as witness Switzerland, with its 72 per cent. of German-speaking population, and its remaining 28 per cent. chiefly French and Italian-speaking. Whilst cosmopolitanism reaches its zenith in Austria-Hungary, it is characteristic of continentalism. Necessity and circumstance make bi-lingualism a common feature of large areas, whilst the operation of political expedients, such as the insistence upon a common language for educational purposes, adds potently to the bi-linguistic forces. British insularity imposes physical disabilities upon her people: not all can lightly undertake a Channel crossing, whilst comparatively few have international interests, or the time and money necessary to place themselves in circumstances in which a foreign language can be heard and spoken.

The social facts which militate against language proficiency are excessive. In the first place there are, broadly speaking, no circumstances in which a knowledge of language

(b) **Social Facts** can be useful outside of business. Then *qui bono*?

In the second place, there are abundant subjects of knowledge and abundant other attractions in which knowledge and skill can afford that personal gratification which will stimulate the individual to their acquisition; all these militate against language study. In the third place, there is an absolute stone wall in public opinion which bans all social opportunities of language conversation. This compels anyone who would like to keep up his knowledge by taking advantage of chance social conversation or discussion, to forego it, lest he should be considered as "airing" his knowledge. Hence, the student is compelled to silence the moment he leaves the classroom, until he re-enters it again. It is difficult to conceive how this can be got over, but it leaves one with the feeling that this social taboo has resulted rather from the tyranny of the ignorant than the importunity of the linguist.

English has, to all intents and purposes, dropped its inflections; other languages retain them to the full. Hence, whilst “English has no grammar,” as the foreigner always maintains with contempt, the student of a foreign language is up against inflections and genders, moods and syntax, to an interminable extent. Of consistency there appears to be none, and the grammar is a welter or a nightmare. Latin will afford much help in the Romance languages—to the individual who has acquired it—but, except for its educational results, it has no value to the student of a Teutonic, Slavonic, or an Eastern tongue.

(c) Foreign Grammars

In not a few cases, the Roman characters which have become the standard in English and a few other languages, are re-placed by other signs, both for printing and writing. This difficulty is not very serious, but it is, nevertheless, an operative one, and it is to be borne in mind. It is the last straw that breaks the camel's back.

(d) And the Written Characters

The once-a-week classes to which reference has already been made, practically compel anyone who wants to make rapid progress in a language to pay the high fees of the special language schools in order that he can receive intensive instruction. At the price, he can then get one hour a day or ten a week, or make any other arrangements he likes. To many people this is prohibitive, especially as it is only in large towns that language schools exist, thereby entailing time and travelling expenses to all who do not reside in these towns.

(e) Intensive Instruction is too Costly

Since business is practically the only sphere for the application of language knowledge, the person who would otherwise be willing to acquire it, along with the person who has acquired it, finds himself compelled to take up commerce in some form or other if he would put his knowledge to practical use. This means further study, and also business experience, with, usually, some special technical knowledge of a particular branch of business. These requirements practically rule out all but a special fraternity.

(f) Lack of Business Knowledge

Without exhausting the question, it may finally be added that,

with everything in the way of teaching being left to the classroom without any external backing; with the classroom presenting only a mere fraction of teaching time, because of other (g) **And generally** demands upon the curriculum; with the living language being accessible only by foreign travel and residence—requisites beyond the average possibility of attainment—our insular ignorance of foreign languages is abundantly shown to be the result of a number of weighty disabilities, and that there is nothing to prove any national inability to acquire them.

The work involved in the teaching of a subject is too frequently measured and expressed in terms of "difficulty"—the subject is hard or easy. These terms may be quite necessary constituents in an assessment: the mistake is to regard them as comprehensive of the whole.

**The Moral is a
Key to what
is Required**

The object of the previous discussion has been to suggest that, in the learning of a foreign language, at least, there are other considerations, and that these have still greater weight and emphasis. *Great as the difficulties inherent in the structure and grammar of a foreign language may be to an English student, the circumstantial difficulties are greater, for—*

1. *He cannot hear the language outside the classroom.*
2. *He may not speak the language outside the classroom.*
3. *He cannot get abroad.*
4. *He cannot definitely anticipate that the language knowledge will ever be worth the while.*

Of these difficulties, Nos. 1 and 2 demand a remedy; No. 3 calls at least for a palliation in the form of a substitute; No. 4 requires an inducement, though not necessarily a financial one. These, translated into practice, mean—

1. Oral instruction and conversation—arranged on intensive lines.
2. The language circle, or other continuative provision.
3. Intellectual and other encouragement—more general esteem of language knowledge, more social intercourse for language purposes, direction in the literature of the language studied with provision of adequate works therein, business openings, etc.

Certain languages are taken in secondary day schools as part of the ordinary curriculum. It is sometimes maintained, therefore, that it is an educational waste to admit ex-secondary school students to the commercial course and make them relinquish their

language study—to let it rust or die out for want of a little attention. This is largely a plausible fallacy. The ex-secondary school student

**The Position of
Languages in
the Commercial
Course**

is in no better position for commencing the commercial course than other students; he still finds the same plethora of subjects, all necessary at the very beginning, which exclude—amongst other desirable things—the continuance, for the time being, of the language knowledge gained at the day school. In other cases, students have no language foundation at all. Both considerations indicate the general necessity for language study to follow the acquisition of other commercial subjects and not to run *pari passu* with them. It would make for higher language proficiency and more effective schemes of instruction if a general age limit of, say, 18, were imposed, along with the segregation already mentioned earlier in this chapter.

If language instruction is to be effective, the question of cost must be faced in a very liberal spirit. For instance, if a line of

**Intensive
Methods of
Organisation**

minimum number must be drawn when a class dwindles, it should be as low as four or five in language classes, provided that other precautions have been taken to ensure that the quality and suitability of the students are satisfactory. Considerations like this may be regarded as aspects of intensive instruction. The best intensive methods would be to require daily attendance at the classes. This would, of course, defeat its own ends in practice, by making it impossible for many students to comply. A compromise, therefore, should be made by requiring at least two—and, preferably, three—weekly class attendances. Further, language classes should be continued as nearly as possible the year round. The long summer break which usually occurs with continuation classes should be bridged in the language classes. If some relief is necessary, let it take the form of diminished class meetings only—not a cessation.

Bearing in mind the character of the grammar of foreign languages, attention to this must mark any system of instruction. At the

**Teaching
Considerations**

same time, this is not a justification for the old method which taught painfully and laboriously by grammatical exercise of the type: "My grandmother has seen little Joseph's aunt: she buys her a pen-knife."

Every fact of grammar that is necessary should, as far as possible, be assimilated into the most effective forms, and repeated in the instruction until they become fixed. Genders, for example, should be classified into subject groups, well illustrated by vocabulary groups, and not treated promiscuously; whilst they should be further fortified by striking or helpful associations of adjectives, the combinations being further embodied into sentences that will give them life. In this way the teacher can do very much to help these elusive matters to stick in the memory. The apparently diversified character of a promiscuous set of words fails to leave an abiding impress, for the very diversity bewilders and also excludes adequate repetition.

(a) **Fixing
Grammar**

Again, grammatical constructions should be associated in suitable sentences and phrases that will most easily recall them, *i.e.*, make them intuitive and not to involve an act of memory. A few such constructions, with slightly varied terms and expressed in effective or striking sentences will make the constructions natural; the teacher merely needs to have a stock of set examples for frequent repetition, this stock being both repeated literally and diversified sufficiently to call for constant alertness in the pupils. Syntax of a formal character should not be resorted to more than is really avoidable. A good deal of so-called idiom, if properly analysed, can be put down to grammatical construction and grouped; such idiom cannot be taught more effectively than by this grouping.

Of course, after all is done by the teacher that he can possibly do, it will rest with the student as to whether or not he acquires the knowledge that is sought to be imparted to him. Still, it is only too easy to diminish the teacher's responsibility and to throw the full onus of the student's burden upon himself. This, however, is not to view relative responsibilities in the right perspective. Over and above mere teaching and direction, the teacher stands forth as an expert, part of whose professed qualifications is to be a master of method; whilst the student needs the help of method as well as of knowledge and explanation. That which must inevitably be left to the student to acquire or not should be a minimum, and there should be a constant endeavour by the teacher to reduce this minimum to vanishing point. In language teaching, all the

teacher's resources should be directed to the perfection of method, so that he is of the maximum assistance. Analogies and contrasts, causes and consequences, labellings and groupings, associations and dissociations, are always to be found if persistently sought, and it is these, combined with persistent occasions of recall, that make for good memoriter work. These are the things that only the teacher can probe, and they should be his special charge. Thus, verb conjugations ought not to be left to the student to groan and sweat over—or to evade if he have not the requisite grit. Even if the teacher cannot find any reason why one form should have become fixed in a particular mood or tense, he can still help the pupil successfully by creating the necessary occasions of revision and memorial recall—compelling effort and aiding memory by one more, and still one more, mental impression. The most helpful words, for example, in remembering particular tenses—regular or irregular—are probably the third person singular and the first person plural. With *one* singular word certain, and *one* plural one, the whole tense is usually recovered. The memorial art is here persistent occasions of recall: the student's whole temptation is to put away the evil thing, and it should be the teacher's to administer the antidote by constantly holding on.

Language teaching always admits of the use of two senses—the eye and the ear—and there should, therefore, always be an employment of both. It is very doubtful, even for training the ear, whether the eye should not constantly be retained as an auxiliary thereto. Certainly the general proposition “employ two senses” is the root of good method. It follows that oral work will always take place, and that the student will have the advantage of the written or printed word to assist ear and memory. Much controversy has raged on questions of method in language teaching, and, of course, advocates of any method can point to conspicuous successes achieved under the method. It is less a proof of the value of the method than of the value of a clear course of procedure to be carried out; and, provided that this course is reasonable and the teacher follows it compliantly, results are bound to follow. What the method really does is to ensure that the teacher shall employ the senses in the way laid down, that way being probably better than the teacher would have personally evolved, being the mature

(b) Always Two
Senses Employed

and considered result of the inventor's knowledge and experience. Hence, neither memorial grammar work nor the learning of vocabularies should be demanded of the student until these have been carefully read or repeated by the teacher, and again by the class.

A "good accent" is, obviously, desirable: it distinguishes the linguist from the tyro, and makes the foreigner to become a native.

For those who have to undertake foreign commercial travel, accent becomes an important consideration; it may, in a valuable degree, be a passport to confidence and business. If, however, there is to be a concentration of business with allied countries after the war, to speak a foreign language with an English accent will not be the disastrous thing that the "good accent" extremists would prophesy. By all means let all that the teacher does be as perfect and efficient as possible, but do not let the sense of proportion in things be lost sight of. The bulk of commercial students require—or, when they eventually apply their knowledge, will require—to write the foreign language rather than to converse in it. Ear training in order to take the words from dictation, and eye training in order to transcribe and spell well, will more likely be requisite than conversational power. The true place of the latter is for memorial purposes; to help in the acquisition of constructive power and of a ready vocabulary. The truth is that the "good accent" school have made their theory to be as burdensome as a white elephant, if, indeed, it may not be regarded as actually the white elephant of language teaching. It has certainly added one more disability to the already burdensome ones that English students have to bear.

To discuss pronunciation is at once to be up against the question of phonetics. What is the function of phonetics in language study? In practice, phonetics has imposed upon

(d) **And Phonetics** teachers and students a set of symbols, largely arbitrary, and involving, on the one hand the acquisition of a new alphabet not belonging to the language to be studied, and, on the other, the additional burden of correcting against the phonetic spelling, the actual spelling which must be adopted when the language is written. The result is that students may pronounce well and spell badly—not the order of qualifications

which the ordinary commercial student of languages requires to develop. That phonetics secures excellent results in pronunciation is beyond question—it is demonstrated wherever the system is practised, and even young children read the symbols fluently. But is this additional burden necessary? Cannot the same objects be achieved in conjunction with the native spelling? Surely. Even in English there is *some* uniformity of sound, despite our only too-abundant absurdities. The system of dictionary indication of sound values will surely admit of the same application to the student of foreign language as to the native. What is wanted—and all that is wanted in order to pronounce from the printed word—is a correct ear for, and voicing of, the key word or sound, which can be taught by the teacher. Particular phonetic symbols may have a convenience in enabling particular sounds—those which are the most troublesome and, therefore, oftenest required to be demonstrated—to be indicated to the eye as well as being pronounced for the ear, and their use will then conserve time by economising verbal explanation and excessive voicing (*i.e.*, may make the teacher's work easier and effect the result better). In that case, let the phonetic symbol be introduced by all means: it is an adjunct to be welcomed. But that is very different from the extreme application of phonetics—the printing of books and lessons in phonetic symbols. *The real necessity for learning phonetics falls upon the teacher, not upon the taught.* The value of a scientific study of sound values and sound production is almost incalculable to the teacher *qua* teacher; armed with it, he teaches in an effective way that would be impossible without it—he attains results with the greatest economy of effort and the greatest precision. Phonetics, in short, is a teaching instrument—a subject of interest for the teacher only.

Conversation is an economical medium to facility of expression, and it is, therefore, a fundamental requisite in teaching method; writing and reading are quite necessary, but the

(e) **Conversation** one is a particularly slow method, and the other one that lulls the faculties, calling for no constructive effort—the real effort that fixes. In the application of conversation, however, method plays a most important part. All conversation lessons should be carefully prepared. Merely to talk upon a given subject is to talk loosely and discursively, fixing

little, and losing the bulk of what has been discussed. The picture-subject method has a certain value, especially with children, in that it compels the teacher to follow certain lines laid down in the nature of the illustration itself, whilst at any future lesson the bulk of the vocabulary and sentences can be recalled (*i.e.*, can be revised as often as necessary). Concentration with, and visual aids to, memory are the good features of this system; its weakness is that the words used tend to remain oral and do not become visualised. In the application of the system, therefore, this defect needs to be guarded against. Adults, however, can follow the teacher with sufficient attention not to need a stimulus of this kind, and, generally speaking, the picture method is unsuitable to them. What is most needed is the written vocabulary—the words and the phrases. This seems to have been as well concentrated and compiled in Charlin's books (published by Hachette) as in any, and conversational lessons of a most effective kind can certainly be built upon these books. At present they appear to be available for only the French and German languages, but the principle is equally capable of extension to any other.

The greatest function of reading in language study is for purposes of self-help. The student who reads acquires a vocabulary, and consequent power over the language that he

(f) **Reading** cannot acquire by any other method of private study. At class, reading aloud adds the further value of exercise and correction in pronunciation. The value of reading is in danger of being largely lost: (*a*) if the work read is too difficult for the pupil, and, therefore, involves too much effort to study and understand; or (*b*) if the reading is too spread. One book read and re-read will aid the student more than half-a-dozen read once. The natural temptation, however, is to proceed to a new text immediately on completion of the old one.

The student should be taught to use his text and not merely to read it. All words which have to be looked up should be underlined and noted in the margin; for early reading practice in particular, the books selected should, if possible, have marginal vocabularies as well as final ones. With this help, the student is much more likely to be persuaded to re-read; the normal student is not to be expected to go through the drudgery of hunting up words a second time. The mere re-reading of a text also, however well it

has been done the first time, will always involve—and encourage—a closer reading and a desire to understand the work more thoroughly (*i.e.*, the study of the work will be intensified rather than weakened), and words which were accepted in a vague or general sense become, at the succeeding reading, unsatisfying, and something more precise is wanted. The student, therefore, will find plenty of material for yielding further study when he comes to re-read.

It is impossible to cover the desired ground in class. The teacher may help the reading, as already suggested in the chapter on “English,” and he will, doubtless, desire to do so; but the students must do most of their reading as home study. They will need encouragement, and the teacher’s general oversight and solicitude will go a long way. Dictation taken from a prepared number of pages will also help to maintain the regularity and steadiness of the reading.

Of itself, the commercial language of a country is a very considerable problem. To this must be added the ordinary colloquial language, the two together making a very large demand upon the commercial student for efficiency.

(g) **“Commercial” Language** Much, therefore, as a literary foundation might be valuable from the educational point of view, the amount of work to be done in other respects puts the literary basis out of the question. Language study in the commercial department should start with a single eye to the result to be attained, and all the work and methods should be directed thereto. The elements of normal conversation should be first aimed at, the vocabulary, however, being always selected with as much commercial bias as possible. The teacher will not find, at the present moment, a text-book on these lines, and he will require, therefore, to adapt the material that lies to hand. The general plan should be to assimilate into the vocabulary the easier parts of the better “commercial” language texts, to bring in as soon as possible a reader of general or semi-commercial interest—preferably on the social and general life of the country whose language is being studied—and later to add a work on some economic or similar subject, together with one yielding definite commercial study—one treating of commercial organisation and commercial correspondence. If the requirements of the particular students composing the class are sufficiently uniform, a commercial trade organ may also occasionally be read.

The provision of a suitable teacher will always be a matter of real difficulty. The type of man required is not easily available, for he should be a good linguist, a good teacher,

The Teacher and a man with business knowledge. Compromise will generally be necessary, and, for lower classes, an English teacher who has a good language knowledge is probably preferable to a native teacher. The latter, *inter alia*, is so often unable to deal satisfactorily with a class, and, of course, in the lower stages the classes are largest. Later, a native may do good work, but then the difficulty of getting a man with commercial knowledge is very great, since most native language teachers are academic men who depend largely upon day school appointments to yield them an income.

Enough use is not made of the gramophone for teaching purposes. It is an excellent instrument, and some good general schemes of study have already been brought into being. Where the number of class meetings is limited, and, indeed, in more fortunate cases also, the teacher's work could be supplemented by quarter-hour assemblies on other than the language class nights for the purpose of listening to suitable records, these being repeated two or three times successively, typed or printed copies of the matter being provided for the students in attendance. Particular records can usually be made—and, if not, any matter that is desired can be had transferred to a record for a cost of about 3s. Thus, a complete scheme can be worked out at a moderate cost, and, aided by a little organisation, a valuable intensive aid can thus be attached to the ordinary class teaching. The experiment is worth while.

When students attain some real proficiency in a foreign language, the institution should make special provision for practice and further study. Whatever may be provided in

The Language Circle the way of further instruction, it is extremely desirable that something wider and more social should be organised. Language study is a long process, and if English students are to overcome the grave disabilities under which they suffer, the higher work in language study must be fostered. When the higher classes have been completed, it so often happens that students are turned adrift—just when they can most benefit by organised assistance, and, perhaps, most need it. Here, the language circle seems the ideal thing. Naturally, the

number of people who will be competent for really advanced work will be comparatively small; but this must be borne in mind, and, on the one hand, too much must not be demanded as a qualification for admission, and, on the other, the services of enthusiastic people must be secured, so as to prevent disintegration should the numbers at first prove small.

The language circle should be generous as regards all the conditions of admission. It is not, for example, material whether or not those admitted have been through the institution course—the work here is educational, and it is all good, and more than good, to get work of this kind done with *any* persons. Big and little, young and old, therefore, should be made welcome, and the responsible authority should be ready to grant room accommodation, light, and heating gratis, the cost being regarded as a most necessary and admirable expenditure of educational funds.

As regards general organisation, the language circle should secure a few leaders who have special competency and interest in the language, and these should enter prominently and freely into the work. Too much time should not be given to general conversation—many people are diffident and lack conversational ability, even in their native tongue, quite apart from the greater task of conversing in a foreign one. Good work can be done by getting individuals to read from prepared sources, to recite, to give short papers (with opportunity for discussion afterwards), and so on. An address may also from time to time be provided, a play prepared, and discussions on books read on the Home Reading Circle plan be arranged. At times, a native visitor from the particular foreign country may be introduced, and, whether he merely converses or is good enough to address, his presence will be most desirable and stimulating. In the early days of shorthand, “evercirculators” were an invaluable means of propaganda work, and the practice might be found valuable in the language circle.

APPENDIX I

EDUCATIONAL PROBLEMS

NECESSARILY, but not always granted or acknowledged, education must ever rank first amongst progressive social institutions : it is the first to receive stimulus, and it is itself the instrument for effecting stimulus in almost all directions. The social reformer looks to the education of the masses to effect the realisation of his schemes; the politician undertakes strenuous campaigns in order to educate the public mind in the direction necessary to achieve legislative enactments; the sectarian will wage bitter fights or work with untiring insidiousness to capture and hold the schools. It was an impulsive recognition of this vital factor in human influence which drew the ejaculation from an atheist demagogue, whose open-air meeting was temporarily interrupted by the march past of a school cadet corps, "Aye, aye, catch 'em young!"

Educational problems, then, must always be with us. Hydra-headed, one is no sooner disposed of, than another takes its place.

Without educational problems, there is the certainty of apathy and stagnation, and the probability of national retrogression. But there are problems and problems. Factional party and sectarian problems inflict a curse upon education. They bring bitterness and strife into a noble work, and education suffers unmitigated evil therefrom : as educational problems, these matters are always spurious. There is only one true educational problem, always and ever—that of constant and sound progress. And in forwarding this only legitimate aim, there need be no heat, no bickering, no bitterness. The necessity for constant progress—but too often provocatively named "reform"—should be an agreed question, and its character and opportuneness, its ways and means, its direction and degree, should be considered adequately and judiciously. Identified with every progressive movement should be the teachers, seeking to act less as executives than as advisers and critics—advising as experts, criticising as the nation's trustees. Most directly interested professionally, responsible as the repositories of

a great national trust, there should be no sounder and more constant students of educational problems than the teachers.

The life of a progressive nation is marked out in epochs of educational change. And whilst a generation may be but all too brief in which to effect the change, the resultant progress is always profound. In English history, these stages are well marked, and are universally recognised. With the deluge of the Great World

War another epoch is upon us. New human capacities have been revealed, impelled by unexampled demands. The problem of to-day is the conservation of the new capacities, the satisfaction of the new demands. New standards are emerging, and society seeks the adjustments of these higher levels. The effective age of maturity has been assailed and has succumbed.

Both sexes have shouldered responsibilities years earlier than they were formerly allowed to pass out of tutelage. And the change is to be permanent—to be fixed and assured by an educational renaissance. The iconoclast, the savant, the administrator, the man-in-the-street, are all looking beyond the days of bloodshed, and are all turning to education to rise, as a new Atlas, and bear upon its shoulders the burden and responsibility of the new progress.

Two spheres of educational work are already marked out for searching—and drastic—investigation. They are the spheres of primary and continuation education respectively. Readers of this book are directly concerned with the latter. The first phase of the investigation will be the question of compulsion. It was,

indeed, a problem that had risen sporadically before the war, and considerable steps in that direction had already been taken by authority. The educational and financial waste involved in the cessation of all specific education by the mass of the people at 13 or 14 years of age was becoming clamant for a barrage. The problem is second in importance only to the adoption of compulsory education in 1870. The potentialities which such a barrage holds are incalculable—potentialities of scope and of progress. In scope, it will embrace the teachers as well as the students. The training and qualifications of continuation teachers must necessarily undergo investigation and revision. Whatever defects primary education

has revealed, it has always been far ahead of continuation instruction. Too frequently has the continuation student transferred his training from the hands of the expert craftsman to those of the amateur—from the trained day school teacher, that is, to the continuation novice. There cannot be any doubt that something, at least, of the enormous educational waste of the past has been due to this circumstance; the mitigating influence has been the increased amenability of the continuation student due to age, otherwise the injury would have demanded attention earlier. For the time being, the question of the student can be left to other hands: for the continuation teacher, the problem is a personal one—one of new standards of efficiency, in order to be worthy of the new, onerous, and responsible duties which are to fall upon him.

An aspect of the new investigations will be the question of day commercial schools. These have been long due, and but for the determined opposition of the Board of Education, **And, incidentally, Day Commercial Education** would have become already established. Fears that their scope would encroach upon that of secondary education have been the dominant cause of the Board's opposition; but better knowledge of what is required and of the type of student for whom such schools would provide will eventually remove this—if more direct public demands do not act the more promptly and effectively. And for this work a new type of commercial teacher will be imperative: he ought to evolve from the old.

APPENDIX II

TEACHERS REGISTRATION COUNCIL

Address—47 BEDFORD SQUARE, LONDON, W.C.

Conditions of Registration.

The following are the conditions approved by the Council under which entries may be made on the Register—

I.—ATTAINMENTS

The applicant must have obtained one of the qualifications set forth in the Appendix to these conditions.

This condition will not apply in the case of teachers who produce evidence satisfactory to the Council of having had not less than three academic years' experience as recognised teachers in Universities and institutions of University rank, approved by the Council for this purpose.

II.—TRAINING IN TEACHING.

The applicant must produce evidence satisfactory to the Council of having completed successfully a course of training in the principles and methods of teaching, accompanied by practice under supervision. This course must extend over a period of at least one academic year, or its equivalent, and must be carried on under conditions approved by the Council for this purpose.

This condition will not apply in the case of teachers who produce evidence satisfactory to the Council of having had not less than three academic years' experience as recognised teachers in Universities and institutions of University rank, approved by the Council for this purpose. It may be modified in other cases where an applicant satisfies the Council that facilities for the prescribed training do not exist.

III.—EXPERIENCE.

The applicant must produce evidence satisfactory to the Council of having had a period of experience as a teacher in Universities, Colleges, Schools, or similar educational institutions, accepted for this purpose by the Council.

The period of such experience required is *either*—Three academic years' experience where the applicant is mainly or solely employed in teaching, *or* Five academic years' experience where the applicant is not mainly or solely employed in teaching, subject, in the latter case, to the provision that the Council may require evidence of an additional period of experience. The length of this additional period will depend on the total amount of time which the applicant is shown to have devoted to teaching.

Of the required period of experience, two academic years at least must have been spent in one school or institution, or under one governing body, or the whole period must have been spent in not more than two schools or institutions.

The certificate of experience must be accompanied by evidence satisfactory to the Council that the applicant has shown fitness for the teaching profession.

IV.—AGE.

The applicant must have attained the age of twenty-five years.

V.—FEE.

The fee for Registration is a single payment of one guinea. Applicants for admission to the Register must send with their application a remittance for one guinea, which will be returned should the application be refused.

VI.—CERTIFICATE OF REGISTRATION.

Applicants accepted for Registration will receive a Certificate of Registration, which must be returned to the Council once every nine years for renewal.

In no case can a duplicate of the Certificate of Registration be supplied.

VII.—EXPIRATION OF CERTIFICATE OF REGISTRATION.

The Certificate of Registration is valid for a period of nine years from the date of its original issue or last renewal. At any time within six months of the expiration of this period the Certificate will be renewed without fee, provided that it is returned to the Council together with an application on the form to be obtained from the Secretary. This form will be sent to all Registered Teachers at least six months before the date of expiration of their Certificates. Certificates which are not renewed in the proper form and within the prescribed period will be cancelled, the Register Entry being removed from the Register.

VIII.—RE-ADMISSION TO REGISTER.

When a Certificate of Registration has been cancelled it cannot be renewed, but a fresh application for Registration may be made under such conditions as may be prescribed by the Council.

IX.—REGISTER ENTRY.

Applicants accepted for Registration will receive, in addition to the Certificate of Registration, a signed copy of their Register Entry containing the Name and Address, the Date of Registration and the Register Number, together with a statement of the Attainments, Training, and Experience on which the applicant was admitted to Registration.

X.—ADDITIONS TO REGISTER ENTRY.

Registered teachers who desire to have their Register Entry altered by the addition of new particulars as to Attainments, Training, or Experience must apply to the Council enclosing their Certificate of Registration and the signed copy of their original Register Entry, together with the necessary evidence and a fee of two shillings and sixpence. Should the application be granted, the Register Entry will be altered accordingly, and a signed copy will be forwarded to the applicant. All changes of address must be notified promptly, and will be recorded and acknowledged without fee.

XI.—DUPLICATES OF REGISTER ENTRY.

Registered Teachers who desire to have additional signed copies of their Register Entry must apply to the Council enclosing their Certificates of Registration, together with a supplementary fee of one shilling for each copy.

Qualifications Required to Satisfy Condition I. (ATTAINMENTS.)

1. A certificate of having passed the final degree examination of any University approved by the Council for the purpose of Registration, under such conditions as to courses of study and preliminary examinations as may be accepted for the time being by such University.

2. A certificate of having passed the examination prescribed or approved by the Board of Education as qualifying a teacher for recognition as a Certificated Teacher in Public Elementary Schools.

3. The Diploma or Course Certificate of any University, Technical Institute, or other institution, approved by the Council for the purpose of registration, provided that such Diploma or Course Certificate is accompanied by evidence satisfactory to the Council that the applicant has passed through a course of instruction extending over the period prescribed, and including such ancillary subjects as the Council deems necessary. The prescribed period for such a course is three academic years of full time day instruction, or five academic years of part time instruction, or three academic years of part

time instruction where the applicant after attaining the age of sixteen has had seven years of practical experience of the profession or industry concerned.

4. A certificate of having passed an examination conducted by any Joint Board or other examining body, approved by the Council for the purpose of Registration, provided that it is shown to the satisfaction of the Council that the applicant has passed through a course of instruction extending over the period prescribed and including the subject or subjects of the examination, together with such ancillary subjects as the Council deems necessary. The prescribed period for such a course is three academic years of full time day instruction, or five academic years of part time instruction, or three academic years of part time instruction where the applicant after attaining the age of sixteen has had seven years of practical experience of the profession or industry concerned.

5. In subjects in which the Council is satisfied that no degrees or diplomas exist, of the character described in 1-4 above, and in exceptional cases, the Council may accept other satisfactory evidence that the attainments of the applicant are of a sufficiently high character to warrant Registration.

NOTE.—In cases where the degree, diploma, or other qualification, enumerated in 1-5 above, has been obtained in respect of a technological subject, the Council will require evidence that the applicant has, after attaining the age of sixteen, spent not less than thirty-six calendar months in the practice of the profession or industry concerned. Of this period at least twelve months must be concurrent with or subsequent to the course for the degree, diploma, or other qualification held by the applicant.

CONDITIONS ALTERNATIVE TO I, II, AND III. IN FORCE UP TO AND INCLUDING DECEMBER 31st, 1920.

Up to and including December 31st, 1920, the Registration Council will be prepared to consider an application for Registration from any teacher who is unable to satisfy fully the requirements of Conditions I, II, and III, provided that the applicant satisfies the requirements of Conditions IV and V, and also produces evidence satisfactory to the Council of having had the period of experience, prescribed below, as a teacher in Universities, Colleges, Schools, or similar educational institutions, accepted for this purpose by the Council.

The period of such experience required is either—Five academic years' experience where the applicant is mainly or solely employed in teaching, or Ten academic years' experience where the applicant is not mainly or solely employed in teaching, subject, in the latter case, to the provision that the Council may require evidence of an additional period of experience. The length of this additional period will depend on the total amount of time which the applicant is shown to have devoted to teaching.

Of the required period of experience, two academic years at least must have been spent in one school or institution, or under one governing body.

The certificate of experience must be accompanied by evidence satisfactory to the Council that the applicant has shown fitness for the teaching profession.

The required period of experience will be reduced by one year in the case of applicants who produce evidence satisfactory to the Council of having completed successfully a course of training in the principles and methods of teaching, accompanied by practice under supervision. This course must extend over a period of at least one academic year or its equivalent, and must be carried on under conditions approved by the Council for this purpose.

In the case of teachers in Public Elementary Schools at least two academic years of the required experience must have been obtained subsequent to the recognition of the applicant by the Board of Education as a Certificated Teacher in Public Elementary Schools. This condition does not apply in the case of Teachers in Schools for Blind, Deaf or Defective Children, who may be accepted for Registration under the foregoing paragraphs of these Alternative Conditions.

Registration of Private Teachers.

The foregoing Conditions of Registration provide only for the admission to the Register of such teachers as have had experience in Universities, Colleges, Schools, or similar educational institutions.

The Council is now prepared to receive applications from teachers whose experience has been wholly or partly gained in the instruction of private pupils.

Such teachers are required to satisfy the prescribed Conditions of Registration or the Alternative Conditions with the addition that—

(1) Private teachers applying under the Alternative Conditions are required to produce evidence of attainments satisfactory to the Council. (Such attainments should be described on Form A, and the necessary evidence must accompany the application.)

(2) Private teachers must obtain certificates of experience signed by three persons of responsible position who have personal knowledge of the applicant. One at least of these must be a Registered Teacher and another must be a person by whom the applicant has been employed as a teacher for at least one year. (These certificates should be entered on Form B and must be sent with the application.)

(3) A record of teaching experience must be set down in the space provided on Form A.

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